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SCM PIGMENTS
SCM CORPORATION

2900 MIDDLE ROAD, P. O. BOX 310, ASHTABULA, OHIO 44004 (216) 998-1825

September 12, 1986

Mr. Basil G. Constantelos, Director
Waste Management Division
United States Environmental Protection
Agency, Region V
230 South Dearborn Street
Chicago, Illinois 60604

Re: Fields Brook, Ashtabula County, Ohio

Dear Mr. Constantelos:

Enclosed herewith is the Amended Response of SCM Corporation to EPA's Request for Information dated May 16, 1986, relating to the above-referenced matter. This transmittal completes SCM's response thereto.

A substantial amount of additional information is being provided herewith in this Response. Please note that this Response also refers to documents previously submitted in prior Responses to this Request. Those documents Nos. 1-1527, are not being resubmitted.

If you or your staff have any questions on any of the foregoing, please call us.

Sincerely,

Frank Tyneski
Plant Manager - Plant 1

Douglas A. Towner
Plant Manager - Plant 2

am

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

In the Matter of:	)	Response of SCM Corporation to
	)	the May 16, 1986 U.S. EPA Request
FIELDS BROOK	)	for Information Pursuant to
ASHTABULA COUNTY, OHIO	)	Section 104 of the Comprehensive
	)	Environmental Response, Compen-
	)	sation and Liability Act of 1980,
	)	42 U.S.C. §9604, and Section 3007
	)	of the Resource Conservation and
	)	Recovery Act, 42 U.S.C. §6927.

INTRODUCTORY STATEMENT

SCM Corporation hereby submits this initial response to the May 16, 1986 U.S. EPA Request for Information concerning Fields Brook. Contemporaneously herewith SCM is requesting an extension of time for responding further to this Request. A certification covering this response will be delivered to EPA along with SCM's supplemental response. Because SCM currently operates two plants in Ashtabula, separate certified answers will be submitted with respect to each plant.

SCM respectfully objects to this request, as it violates the Paperwork Reduction Act of 1980. Similarly, SCM objects to the individual questions which do not pertain to solid or hazardous wastes or hazardous substances, as they are beyond EPA's information gathering authority under 42 U.S.C. §§6927 and 9604. Without waiving these objections or its rights not to respond to this request, SCM is voluntarily answering this request.

Some of the requests seek a considerable amount of information which has previously been submitted to EPA and/or Ohio EPA. In order to avoid the unnecessary burden of submitting documents which EPA already has and thereby complicating the task of document review and maintenance, SCM is describing some documents but not producing them herewith. If EPA no longer has these documents, SCM will provide the agency with copies of such documents or an opportunity to copy them at EPA's request.

In addition to the above objections, SCM also objects to several of the instructions. SCM objects to requests to provide home addresses of individuals where business addresses are given. SCM objects to the instruction requiring it to provide estimates and its method of estimation where specific responsive information is not available or accessible. SCM objects to instructions requiring it to respond based on information in possession or control of third persons, including retained counsel. In addition, SCM specifically objects to the instructions to the extent that they seek the disclosure of attorney-client privileged communications. SCM also objects to the instructions calling for continuing or correcting responses based on information acquired after the submission of a complete response to the Request.

REQUEST FOR INFORMATION

1) Please provide the date, State of incorporation, registered agent and his address for SCM Corporation (Glidden-Durkee Division) (hereinafter referred to as SCM).

Response:

SCM Corporation was incorporated under the laws of the State of New York on October 30, 1924. Its registered agent is CT Corporation System, 1633 Broadway Ave., New York, New York 10019.

2) Provide the addresses of all facilities that have ever been owned or operated by SCM in the Fields Brook water basin in Ashtabula County, Ohio. If any of the facilities that have been operated by SCM were not at all times of operation owned by SCM, provide the name(s) of the other owner(s) of the facility and a description of each property's location.

Response:

SCM Corporation
Ashtabula Plant 1
2900 Middle Road
P.O. Box 310
Ashtabula, Ohio 44004

SCM Corporation
Ashtabula Plant 2
2426 Middle Road
P.O. Box 160
Ashtabula, Ohio 44004

Plant 2 is comprised of four parcels of land:

1) The TiO_2 Plant at 2426 Middle Road
2) The $TiCl_4$ Plant at 1704 State Road

3) 13.73 acres of vacant land fronting on Middle Road across from the TiO_2 Plant
4) 65.05 acres of vacant land fronting State Road across from the $TiCl_4$ Plant

See responses to questions 6 and 8 regarding prior owners and operators of these plants.

3) If any of the property owned by SCM in the Fields Brook water basin has been sold, leased or interests in said property otherwise conveyed by SCM to a third party or by a third party to SCM, state that party's name and the dates of any conveyance or sale.

Response:

SCM purchased Plant 1 from The Sherwin-Williams Company as of October 11, 1974.

SCM purchased Plant 2 from Gulf & Western Industries, Inc., as of July 15, 1983.

4) Provide a legal description of any SCM facilities or property located in the Fields Brook water basin in Ashtabula County, Ohio.

Response:

Legal descriptions will be provided.

5) Provide copies of any and all documents pertaining to the use and ownership of any SCM facility or property in the Fields Brook water basin in Ashtabula County, Ohio, including, but not

limited to, deeds, contracts, leases, subleases, purchase agreements and related correspondence.

Response:

SCM objects to this request, which is beyond the scope of 42 U.S.C. §§6927 and 9604. This request is overly broad and unnecessarily burdensome. SCM is producing herewith the following documents relative to SCM's purchase of Plant 1 from The Sherwin-Williams Company.

a) October 11, 1974 Agreement of Sale (Document 509-44)

b) June 5, 1975 Amendment to Agreement of Sale of October 11, 1974 (Document 545-49)

c) October 11, 1974 Assumption Agreement (Document 550-52)

SCM is also producing herewith the following documents relative to SCM's purchase of Plant 2 from Gulf & Western Industries, Inc.

a) July 15, 1983 Purchase Agreement (Document 553-608)

b) Bill of Sale and Assumption of Liabilities (Document 609-12)

A variety of easements exist on the Plant 1 and Plant 2 property.

6) It is U.S. EPA's understanding that SCM acquired a TiO_2 and a $TiCl_4$ plant (now known as SCM-Plant 2) from Gulf & Western Natural Resources Group. These facilities were located

at State and Middle Roads in Ashtabula County, Ohio. Please provide the following information:

a) the date of acquisition.

b) the nature of the acquisition.

c) the products produced at the facility before and after the acquisition.

d) SCM's position regarding its assumption of liability for actions arising out of operations at the plant by Gulf & Western Natural Resources Group.

e) all documents regarding the acquisition, including, but not limited to, contracts, deeds, leases, subleases, purchase agreements and correspondence.

f) the plant's address.

Response:

a) July 15, 1983

b) Purchase of assets

c) Titanium dioxide was produced at the TiO_2 plant by Gulf & Western before the acquisition and by SCM thereafter.

Titanium tetrachloride was produced at the $TiCl_4$ plant by Gulf & Western before the acquisition and by SCM thereafter.

The vacant land fronting Middle Road was formerly a farm. The farmhouse was used as a construction office during the construction of the TiO_2 plant. The farm buildings were torn down in the last 1970's. A gravel parking lot for contractors remains on the land.

The vacant land fronting State Road was formerly a golf course.

d) SCM did not assume liability for releases or threatened releases into the environment arising out of operation at the plant by Gulf & Western Industries, Inc., if any such liability exists.

e) See response to question No. 5.

f) See response to question No. 2.

7) Provide a list of all present and former plant managers, production managers and plant engineers at any of the above-described facilities. Please state the dates of their employment with SCM and G & W, positions held and last known address. Also, please indicate the numbered Requests regarding which they may have information.

Response:

ASHTABULA PLANT 1
PLANT MANAGERS

NAME AND ADDRESS	EMPLOYMENT DATES	EMPLOYER
George F. Wyman [redacted]	December 1, 1967 to November 30, 1973	Sherwin-Williams Company
Timothy C. Gillen [redacted]	October 1, 1973 to September 1, 1982	Sherwin-Williams Company & SCM Corp.
Frank Tyneski [redacted]	September 1, 1982 to Present	SCM Corp.

ASHTABULA PLANT 1
PRODUCTION MANAGERS

NAME AND ADDRESS	EMPLOYMENT DATES	EMPLOYER
William W. Shepherd [redacted]	August 1, 1969 to September 1, 1970	Sherwin-Williams Company
Timothy C. Gillen [redacted]	September 15, 1970 to September 30, 1973	Sherwin-Williams Company
Frank Tyneski [redacted]	October 1, 1973 to May 7, 1976	Sherwin-Williams Company & SCM Corp.
Edward M. Conneen, Deceased	August 26, 1976 to November 23, 1984	SCM Corp.
Augustus H. Benning [redacted]	June 1, 1985 to Present	SCM Corp.

ASHTABULA PLANT 1
MANAGER-MAINTENANCE & PROJECT ENGINEERING

NAME AND ADDRESS	EMPLOYMENT DATES	EMPLOYER
Frank W. Harris c/o Sherwin-Williams Company [redacted]	August 1, 1969 to May 1, 1973	Sherwin-Williams Company
Harry G. Grieselhuber [redacted]	June 15, 1973 to May 15, 1976	Sherwin-Williams Company
Frank Tyneski [redacted]	May 7, 1976 to August 31, 1982	SCM Corp.
Walter C. Flensburg [redacted]	September 1, 1982 to Present	SCM Corp.

ASHTABULA PLANT 2
PLANT MANAGERS

Name	Dates of Employment	Other Positions Held	Address/Last Known Address
Dr. Thomas H. Goodgame	1/15/63 - 2/22/64		Non-Resonisve [redacted]
Denis E. O'Mulloy	4/1/64 - 3/1/65		
D. Brittain Briggs	3/15/61 - 9/?/65	Assistant Plant Manager	
Edward J. Holland	2/1/65 (7/1/44) - 8/69	Assistant Manager	
Irwin H. Hess	7/19/67 - 6/1/72	Tech. Dir.; VP & Gen. Mgr.; President	
Fred R. Mohrmann	5/8/63 - 7/13/77	Area Supv.; Prod. Mgr.; Prod. Supt.	
Douglas A. Towner	6/20/66 - present	Engr.; Group Leader; Tech. Mgr.-Titania; Prod. Supt.; Mgr. -Sp. Projects	

PRODUCTION MANAGERS - TiO_2

Name	Dates of Employment	Other Positions Held	Address/Last Known Address
Howard Weaver, Jr.	2/1/63 (12/6/43) - 2/1/72	Prod. Mgr.; Mgr. Proc. Dept.; Proc. Engr. Ch. Class; $TiCl_4$ Mfg. Tech. Serv. Rep. Process Engr., $TiCl_4$ Tech. Serv. Coordinator	Non-Resonisve [redacted]
Albert R. Schell, Jr.	3/1/64 - 9/13/65	Pro. Engr.	
Fred R. Mohrmann	(see other listings)		
Douglas A. Towner	(see other listings)		
Ray E. Clark	8/3/64 - present	Shift. Supt.; Prod. Supt.; TiO_2 Assist. Area Prod. Supt.; Assist. Plant Supt.	
Robert L. Suttman	7/22/68 - present	Pro. Eng.; TiO_2 Tech. Liaison; Area Prod. Supt.; Tech. Coordinator Superv. Chem. Engr.; Acting TiO_2 Superintendent; Tech. Supt.	
Ray E. Clark	(see other listings)		
Robert L. Lambert	10/1/80 (2/7/61) - present		

PRODUCTION MANAGERS - $TiCl_4$

Name	Dates of Employment	Other Positions Held	Address/Last Known Address
Fred R. Mohrmann	(see other listings)		
Michael G. Fowler	7/1/63 (8/29/60) - 4/1/71	Junior Engr.; Prod. Engr.; Area Process Engr.	[redacted]
Ross A. Palmer	6/3/63 - present	TiO_2 Prod. Shift Supv.; $TiCl_4$ Prod. Supr.; Warehouse Foreman; QC/Warehouse/Shipping Foreman	
Lowell W. Johnson	4/1/64 - 7/31/68	TiO_2 Prod. Engr.; Process Engr.; Sr. Process Engr.	
Michael G. Fowler	(see other listings)		
Barry G. O'Connell	1/2/68 - 6/30/77	$TiCl_4$ Prod. Engr.	
Alfred C. Steinbronn	12/1/75 (6/26/61) - present	Operations Manager	
Rodney Shimko	9/12/77 - present	Chem. Engr. I; Sr. Process Engr.	

PLANT ENGINEERS

Name	Dates of Employment	Other Positions Held	Address/Last Known Address
Jack H. Thornton	2/1/63 - 6/30/64		Non-Resonisve
A. V. Dickey	6/1/65 (12/1/57) - 4/30/66	Maint. Supr.; Maint. Supt.	
John H. Nuber	5/1/63 - 5/6/66	Engr.; Assist. Ch. Engr.	
Donald R. Murray	1/20/64 - 10/23/70	Proj. Engr.; Sr. Proj. Engr.	
Joseph Romano	3/15/66 - 11/1/70		
John R. Wullschleger	4/20/65 - 2/29/68	M.E.; Gen. Foreman Maint. Supt.	
Paul J. Findlay	1/18/65 - 3/29/74	Engr.; Maint. Supt.	

Messrs. Steinbronn Tyneski and Towner participated in the preparation of this response. As to the other persons named above, SCM objects to identifying the requests as to which they may have information, since this request calls for speculative information which is unreasonably burdensome and which beyond the scope of 62 U.S.C. §§ 6927 and 9604.

8) Provide the names of any predecessor or successor corporations or partnerships which owned or operated any SCM facility, as described above, in Ashtabula County, Ohio.

Response:

Former owners and operators of Plant 1 are:

Sherwin-Williams Company
101 Prospect Avenue
Cleveland, Ohio 44101

E.I. duPont De Nemours & Company
1007 Market Street
Wilmington, Delaware 19898

Former owners and/or operators of the Plant 2 TiO_2 plant are:

Gulf & Western Industries, Inc.
Gulf & Western Natural Resources Group
New Jersey Zinc Company
Jersey Titanium Company
Cabot Corporation
Cabot Titania, Inc.
Cabot Titania Company
Cabot Corporation (2/3) and
Ruberoid Corporation (1/3)

Former owners and/or operators of the Plant 2 $TiCl_4$ plant are:

Gulf & Western Industries, Inc.
Gulf & Western Natural Resources Group
New Jersey Zinc Company
Jersey Titanium Company
Cabot Corporation
Cabot Titania, Inc.
Cabot Titania Company
Cabot Corporation (2/3) and
Ruberoid Corporation (1/3)
RMI Company
U.S. Industrial Chemicals Co.
Mallory Sharon
Stauffer Chemical Company

9) On what date did SCM commence operations of its Glidden-Durkee Division facility at or near 2900 Middle Road, Ashtabula, Ohio.

Response:

SCM acquired Plant 1 on October 11, 1974 from The Sherwin-Williams Company.

10) Provide all knowledge or information you may have regarding contamination from your plant(s) entering Fields Brook, or a tributary thereof, either directly or indirectly.

Response:

See Documents 1-508 produced herewith. A further response is being prepared.

11) Provide all knowledge or information you may have regarding any property owned by you in Ashtabula County, Ohio, which may have been contaminated by prior owners or users. Your response should include, but not necessarily be limited to:

a) names of prior owners or users.
b) use of facility and property by prior owners or users.
c) disposal practices of prior owners or users.
d) volume and nature of sources of such contamination.

Response:

A response is being prepared.

12) Provide all information you may have regarding any other sources of contamination to Fields Brook.

Response:

SCM objects to this question as being overly broad, unreasonably burdensome and calling for a speculative answer.

SCM is aware of numerous publicly available studies and reports of potential sources of contamination with the Fields Brook watershed. Many of which were done by or for EPA or Ohio EPA. The following information is believed not to be reflected in such studies.

a. Douglas Towner recalls receiving occasional reports that Plant 2 TiCl4 plant personnel have observed tank trucks stopping at the State Road bridge over Fields Brook at night and dumping material into Fields Brook. He does not recall the names of the personnel reporting this information or the dates when such information was received.

b. Frank Tyneski recalls receiving occasional reports from Plant I personnel taking effluent samples that after heavy rains an oil sheen originating upstream of Plant I has been observed on Fields Brook and in the Conrail railroad track drainage trenches which empty into Fields Brook. He does not recall the names of these personnel or when these reports were received.

13) Provide the following information regarding any sewer lines (including storm, sanitary or combined sewers) or french drains which receive or have received runoff or discharges from

the old G & W property (now known as SCM Plant 2) and the property located near 2900 Middle Road, in Ashtabula County, Ohio:

a) The location and nature of each sewer line.

b) Whether each sewer line is connected to the main trunk line.

c) Does any sewer line have direct or indirect access to Fields Brook or a tributary thereof?

Response:

A response is being prepared.

14) Provide the following information regarding any drainage ditches which receive or have received runoff or discharges from the SCM property located at 2900 Middle Road, in Ashtabula, Ohio:

a) The location of each drainage ditch.

b) Whether runoff or discharge from each drainage ditch has direct or indirect access to Fields Brook or a tributary thereof.

c) Any information regarding the presence, or potential for releases, of hazardous substances or constituents in the ditches.

Response:

A response is being prepared.

15) Provide the following information regarding any drainage ditches which receive or have received runoff or discharges from the old G & W property (which is now known as SCM plant 2) located at Middle and State Roads, Ashtabula, Ohio:

a) The location of each drainage ditch.

b) Whether runoff or discharge from any drainage ditch has direct or indirect access to Fields Brook or a tributary thereof.

c) Any information regarding the presence of, or potential for, release of hazardous substances or constituents in the ditches.

Response:

A response is being prepared.

16) Does SCM have, or did SCM ever have, an NPDES permit for discharges to Fields Brook or a tributary thereto? Please identify any such permits.

Response:

Yes.

PLANT 1

Permit No.	Effective Date
31000013DD	9-28-84
310000523CD	11-20-78
E-313-BD	7-5-77
E-313-AD	2-6-74 (originally issued to Sherwin Williams)

PLANT 2

Permit No.	Date Issued
31E00017CD	9-28-84
E-317-BD	10-4-84 (originally issued to G&W Natural Resources Group)

17) Did Gulf & Western Natural Resources Group ever have an NPDES permit for discharges to Fields Brook or a tributary thereto? Please identify any such permits.

Response:

Yes.

PLANT 2

Permit No.	Date Issued
31E00017CD	9-28-84
E-317-BD	10-4-84 (originally issued to G&W Natural Resources Group)

18) Describe each manufacturing process that has been operated at all plants owned by SCM at its Ashtabula County, Ohio facilities. For each facility and process provide the years that the operations occurred and all the raw materials associated with or relating to the process.

Response:

PLANT 1

TIO_2 PROCESS DESCRIPTION

(FROM 1969 TO PRESENT)

Titanium dioxide pigment is manufactured in a three-step chloride process. The first involves the conversion of naturally occurring titanium compounds from rutile ore to titanium tetrachloride by reacting the ore with chlorine in the presence of carbon at elevated temperatures. The titanium tetrachloride is cooled, condensed and purified.

Chlorinated waste solids from this step are concentrated in acidic water for disposal via a private contractor to an off-plant dumping site by means of rubberlined tank trucks. The exhaust gases from this step are stripped of

acid forming compounds and any residual chlorine, with the acidic water being used to slurry the waste solids for off-plant disposition. The final exhausts are scrubbed with water which is neutralized and discharged to one of two settling ponds and finally into Fields Brook.

The second step covers the conversion of pure titanium tetrachloride by reacting it with hot oxygen. The chlorine released by this reaction is recirculated back to the process. There are no waste streams for disposal from this step.

The third step takes crude titanium dioxide formed by the oxidation step and processes it by conventional methods to achieve desired pigment properties. The titanium dioxide slurried in water is surface treated and is then filtered, washed, dried, ground and packaged.

The filtrates and wash water are collected in a large settling tank to recover any titanium dioxide present, and the overflow containing dissolved salts ($NaSO_4$ and NaCl) is neutralized and discharged to two settling ponds. Solids are settled out in these ponds, and a final control is made for pH to insure that all discharges conform to specific limits.

Raw Materials

1. Rutile Ore
2. Sulfuric Acid
3. Chlorine
4. Caustic Soda
5. Nitrogen
6. Oxygen
7. Carbon
8. By-Product HCl

BARIUM AND STRONTIUM PROCESS DESCRIPTION

Prior to SCM's ownership of Plant 1, Sherwin-Williams operated a barium and strontium manufacturing process. SCM did not operate this process.

Strontium or barium carbonate was essentially produced in the same process with changes in operating conditions of manufacturing equipment. Both were converted from ores, celestite for strontium carbonate and barytes for barium carbonate. In manufacturing, either celestite or barytes ore (blended with coke) was reduced in a kiln, then milled prior to a carbon dioxide precipitation-crystallization step. The strontium or barium carbonate product was then separated, washed, dried, screened and packaged.

Principal Raw Materials

1. Celestite Ore or Barytes Ore
2. Coke
3. Soda Ash

PLANT 2

T_iO_2/T_iCl_4 PROGRESS DESCRIPTION

For the period from November 1983 through November 1984 the manufacturing processes were the same as those described in Request 19.

Since November 1984 there have been these changes (the basic process is still very similar):

1. Cl_2 gas from the oxidation section is directly recycled to one chlorinator without a separate Cl_2 recovery step. Because of this less Cl_2 must be vaporized at the $TiCl_4$ plant.

2. Only about 30-40% of $TiCL_4$ produced is distilled twice.
3. Some processing equipment at the $TiCl_4$ plant has more capacity and has some mechanical differences but the basic process and raw materials have not changed.
4. The TiO2 process does not require the use of purchased $AlCl_3$ and $SiCl_4$. CO is no longer produced. Toluene is used and so is hydrogen peroxide. $AlCl_3$ is produced from Al pellets.
5. Because there is no Cl_2 recovery step the use of S_2Cl_2, Freon and paracymene has been discontinued. H_2SO_4 is not used for Cl_2 drying but is still used in surface treatment.
6. A dispersant, Tamol QR-874 (Rohm & Haas) is used in high density TiO2 slurries.

The present process is essentially the same as that at Ashtabula I.

19) Describe each manufacturing process that Gulf & Western Natural Resources Group operated at each of its Ashtabula County, Ohio facilities. For each process, provide the years that the operations occurred and all the new raw materials associated with or relating to the process.

Response:

A description of the manufacturing processes is included in Document 613-32. Gulf & Western operated this

process from 1972-1983. The process was the same before that. Document 633-39 contains a list of all raw materials and process aids.

20) Describe any hazardous substances that may have been contained in any by-product or wastes from each of the manufacturing processes described in Requests 18 and 19. Also, describe the amounts of waste, by-products or hazardous substances generated by each of such processes on a yearly basis.

Response:

A response will be provided.

21) Describe the storage, treatment and disposal practices for any by-product or wastes associated with each of the manufacturing processes described in response to Requests 18 and 19. This description should identify any use of drums, tanks, lagoons, ponds, waste piles, ditches, marshes, swamps, land treatment or disposal areas, public sewers, landfills, creeks, or waterways used or affected by such practices.

Response:

A response will be provided.

22) Describe the nature and state of any records and recordkeeping practices that have ever been maintained relating to any storage, treatment or disposal practices for any

by-products or wastes associated with each manufacturing process described in response to Requests 18 and 19.

Response:

A response will be provided.

23) Describe each chemical reclamation process that SCM has operated at its Ashtabula County, Ohio facilities. For each facility and process state the years during which operation of the process occurred, the type of process equipment used, the types of chemicals associated with each reclamation process, the volume processed annually by each process, and the sources of the chemicals.

Response:

None

24) Describe the nature and state of any records and recordkeeping practices that have ever been maintained relating to the volume and kinds of chemicals received and processed as described in response to Request 23.

Response:

Not applicable

25) Describe the characteristics and the nature of wastes or by-products associated with each reclamation process. Such description should include any characteristic or listing that such waste would likely have under 40 CFR Part 261. The

description should also include any hazardous substances the waste would likely contain.

Response:

Not applicable

26) Describe the nature and state of any records and recordkeeping practices that have ever been maintained relating to the characteristics and nature of the wastes or by-products described in response to Request 25.

Response:

Not applicable

27) Describe the practices and conditions relating to the storage of hazardous wastes or hazardous substances upon their arrival at each of SCM's Ashtabula County, Ohio facilities, until the time of their reclamation. Such a description should include, along with any dates when any significant changes occurred:

a) what types of wastes were/are stored in drums.

b) what types of wastes were/are stored in tanks.

c) what types of containment systems for spills or releases were provided at the storage areas.

d) the location of any storage areas.

e) whether drums have been marked with the generator's or transporter's name.

f) whether hazardous wastes from more than one source were ever mixed or commingled in a tank. How common was this practice? Did this include emptying drums into tanks?

g) what was the practice regarding the cleanup of spilled materials from these stored hazardous wastes.

h) did spills or releases (including those caused by fire) of these materials ever occur while they were awaiting processing.

i) whether such wastes were ever stored in lagoons or ponds.

j) what types of such wastes were stored in lagoons or ponds.

k) what type of liner or any other impervious barrier did lagoons or ponds have to prevent the release of materials.

l) what types of wastes, if any, were ever stored in waste piles.

m) what records and recordkeeping practices have ever been maintained on storage and what is the state of those records?

Response:

Not applicable

28) Describe SCM's practices relating to the disposal and treatment of still bottoms, sludges and other non-reclaimed materials accumulated in any reclamation process itself. Please include in such a description, along with the dates for different practices:

a) whether the non-reclaimed materials were drummed up for disposal.

b) if such non-reclaimed materials were drummed up, whether they were normally [or necessarily] put back in the drums of the seller from whom they originated.

c) whether the non-reclaimed material was allowed to accumulate and was stored prior to treatment or disposal.

d) the locations and types of storage areas used for storage of the non-reclaimed materials. Examples of types of storage areas could include drums, tanks, pits, waste piles, ponds or lagoons.

e) any containment systems utilized at these storage areas to help prevent releases of the stored material to the environment.

f) whether any spills or releases of these stored materials ever occurred. Approximately when.

g) where and how such materials were disposed.

h) what records and recordkeeping practices have ever been maintained in regard to the above practices. What is the state of those records?

Response:

Not applicable

29) Describe practices relating to any incineration processes used for disposal of wastes for each of SCM's Ashtabula County, Ohio facilities. This description should include:

a) the location and years during which each incinerator operated.

b) the rated capacity for each incinerator.

c) the normal operating and peak temperature for each incinerator.

d) the rated retention time for materials during the burn.

e) the type of fuel used to bring the incinerator up to operating capacity.

f) how the material was fed to the incinerator.

g) what types of operating records were kept, including temperature and feed rate.

h) the types of air pollution control devices that were installed on each incinerator and stack test results.

i) whether any misting or raining from the incinerator stacks ever occurred.

j) what quantities of incinerator ashes or sludges were generated from the incineration processes.

k) what types of materials and volumes were burned in these incinerators.

l) were any PCBs known to have been burned in these incinerators.

m) did the materials that were burned include non-reclaimable materials from stills.

n) were materials from stills accumulated and stored prior to incineration.

o) did the materials sent to SCM include materials sent there solely for purposes of incineration.

p) were materials sent to SCM for incineration on occasion otherwise disposed. How and why?

q) how and where were by-products of the incineration process (including ash bottoms, fly ash, sludges and scrubber water) disposed.

r) any records and recordkeeping practices that have ever been maintained relating to the described practices. What is the state of those records?

Response:

A small incinerator is located in the Plant 1 Administration Building. It has been used since 1968 to the present for destruction of confidential documents and similar material. It has not been used for the destruction of process wastes. The incinerator is registered with the Ohio EPA. Ash is disposed of in off-site landfills.

30) Has SCM ever disposed or arranged for the disposal of any materials in the Reserve Environmental Services, Inc. landfill? If so, please state:

a) when the disposal occurred.

b) the nature of the solid and liquid wastes.

c) whether the wastes contained hazardous substances.

d) the amount of wastes involved.

e) if known, where at Reserve's landfill the wastes were disposed.

f) describe all terms of any arrangement for the disposal of these materials.

g) what records, if any, have ever been maintained documenting such disposal and arrangements for disposal.

Response:

Yes. Reserve Environmental Services' waste treatment and disposal facilities on Middle Road are outside of the Fields Brook watershed. SCM knows of no materials disposed of by Reserve Environmental Services within the Fields Brook watershed. SCM therefore objects to this question as being irrelevant to the subject matter of this Request.

31) Has SCM ever observed any leachate escaping or being released from any SCM storage or disposal areas on property owned or operated by SCM? If so, describe the location and physical characteristics of the leachate such as color, odor or viscuousness. When and by whom has this been observed?

Response:

No.

32) Do you have any information indicating that leachate from the SCM storage or disposal areas on property owned or operated

by SCM in Ashtabula County, Ohio may have escaped or been released into surrounding ditches, Fields Brook or a tributary thereof? If so, please state it, and include when such occurrences took place and who observed them.

Response:

No.

33) Have soil samples been collected and analyzed or monitoring wells ever been installed in or adjacent to the property to monitor for releases of pollutants or hazardous waste constituents? If so, please provide any data you have from such monitoring activities.

Response:

No.

34) Describe any location on SCM property located in the Fields Brook water basin at which wastes from SCM operations have been disposed. Please state the approximate time of disposal, the types of materials, their chemical characteristics and volumes involved. Also, provide any information you have regarding sample analyses that have been conducted of material in or adjacent to any other locations on SCM property in the Fields Brook water basin at which wastes from G & W operations have been disposed.

Response:

None

35) Describe the location and size of each lagoon, pond, waste pile, trench or pit that has existed on the SCM property and its purpose. For each lagoon, pond, waste pile, trench or pit describe:

a) Any hazardous substances that may be or have been contained in them.

b) The dates of each structure's existence and use.

c) Any construction properties of each pit, pond, waste pile, trench or lagoon which would help prevent the release of materials from it.

d) If not in use now, explain how it was closed or has been modified and the present use of the area.

e) Any pictures, sketches or maps of these facilities.

Response:

A response is being prepared.

36) Provide the name of each customer from who SCM has received hazardous substances for purposes of treatment or disposal, including incineration or reclamation. Further, provide any information you have on the kind of waste received, the quantity of each kind of waste received, the processes used by SCM in handling these wastes, the period during which each kind of waste was received and processed and the likely disposition of any residues from that process.

Response:

Not applicable

37) Provide copies of any documents that you now have that contain information indicating the receipt of hazardous wastes for reclamation, incineration, or other treatment by SCM. Such documents would include logs, invoices, bills of lading, purchase orders, work orders, trucking records, correspondence, contracts or other agreements.

Response:

Not applicable

38) Provide the names of all other off-site facilities that have been used by SCM for the disposal of unreclaimed chemical wastes and hazardous wastes, incineration process wastes and manufacturing process wastes. Provide the dates during which such disposal has occurred and the kinds of wastes sent to each facility.

Response:

SCM has not used any off-site facilities located within the Fields Brook watershed for disposal of its wastes. Therefore, this question is irrelevant to the subject matter of this request.

39) Provide any information you have regarding the waste disposal methods utilized by any surrounding property owners or users.

Response:

None

40) Describe any information SCM may have obtained regarding contaminated fill material or debris deposited in or near Fields Brook or its tributaries. Such should include any information regarding fill allegedly disposed by Brenkus Excavating at or near the residence of Sandra Herl, 935 East 19th Street, Ashtabula, Ohio.

Response:

None

41) A list and description of all liability insurance coverage that is or was carried by you or any predecessor or successor corporations or partnerships, including any self-insurance provisions, that relates to hazardous substances and/or the above-referenced sites. Provide copies of all of these insurance policies.

Response:

SCM objects to this question which is outside the scope of 42 U.S.C. §§ 6927 and 9604.

42) Provide any information that you have concerning the disposal of hazardous substances from operations at Reserve Environmental Services, Inc. including:

a) description of the method of operations at the site (e.g. how drums were rinsed, materials used in drum cleaning, methods of disposal of waste residues from drums, disposal of rinse water, etc.)

b) the disposal locations used by Reserve Environmental Services for residues, rinse water

and solid wastes generated by their operations. This description should include locations both on and off their properties.

c) the disposal locations for any drums discarded by the company.

d) the estimated quantity of drums and waste residue disposed of at each location by the company.

e) whether the company received drums from persons other than SCM for cleaning.

Response:

See response to question 30.

SCM CORPORATION

June 20, 1986

Frank Tyneski
Plant Manager
Ashtabula Plant 1

Douglas A. Towner
Plant Manager
Ashtabula Plant 2

Of Counsel:

Ronald R. Janke
Jones, Day, Reavis & Pogue

6

	Description
G 100 [redacted] 2/20/80	Glaus Pyle and Schomer Sewer and Water Line Plan
7562-6-L[redacted]	SCM Plant Layout

b. The inactive barium and strontium carbonate process facilities were shut down by Sherwin Williams in 1972 and later dismantled. At this time, the locker room (Bldg. #6) sanitary fixtures were removed except for wash basins, and the sanitation facility was deactivated. See Drawing G1002. The outflow from the wash basins is tied into the 736 LF 91" x 58" storm sewer flowing north under Middle Road. All catch basins tie into the same storm sewer. The storm sewer picks up run off from south of the railroad tracks. All active plant sanitary fixtures are connected by underground laterals to the treatment plant. All process sewers and process area stormwater sewers lead to the north ditch which in turn leads to the wastewater treatment facilities.

c. Sewer lines have indirect access to Fields Brook via the wastewater treatment facilities.

Number	Date	Description
G 100[redacted]	2/20/80	Glaus Pyle and Schomer Sewer and Water Line Plan
7562-6-L[redacted]		SCM Plant Layout

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c. Sewer lines have indirect access to Fields Brook via the wastewater treatment facilities.

[redacted] property located at 2900 Middle Road, in

[redacted]

he location of each drainage ditch.

Whether runoff or discharge from each drainage ditch has direct or indirect access to Fields Brook or a tributary thereof.

c) Any information regarding the presence, or potential for releases, of hazardous substances or constituents in the ditches.

Response:

a. The location of existing drainage ditches at SCM Plant 1 are indicated on the attached drawings (Documents 1533-34):

Number	Date	Description	
G1002	2/20/80	Glaus Pyle and Schoner	Sewer and Water Plan
7562-6-L15		SCM	Plant Layout - 4933N - 3674N - 4940N - 4490N (north ditch) - 4560N

b. The facilities' main drainage ditch is the North Ditch located at 4490N. See Drawing 7562-6-L15 Run-off from the plant goes to the North Ditch where it is isolated and subsequently pumped via lift station into process waste and water treatment system and finally discharged into a tributary of Fields Brook; Ditch 3674N. Via the South Ditch, flue pond process water is transferred to Ponds B & A, treated and recycled to the raw water treatment flocculator. This South Ditch will discharge to the Fields Brook only if hydraulic overload conditions occur.

c. The SCM Spill Prevention Control and Countermeasure (SPCC) Plan, March 25, 1986, describes the potential for spills of hazardous substances and constituents in ditches and the structures and response actions to prevent contamination of the environment.

The SPCC plan is attached as Document 1533.

titanium tetrachloride by reacting the ore with chlorine in the pr[redacted]on at elevated temperatures. The titanium tetra[redacted]is cooled, condensed and purified.

Chlorinated waste solids from this step are concentrated in acidic water for disposal via a private contractor to an off-plant dumping site by means of rubberlined tank trucks. The exhaust gases from this step are stripped of acid forming compounds and any residual chlorine, with the acidic water being used to slurry the waste solids for off-plant disposition. The final exhausts are scrubbed with water which is neutralized and discharged to one of two settling ponds and finally into Fields Brook.

The second step covers the conversion of pure titanium tetrachloride by reacting it with hot oxygen. The chlorine released by this reaction is recirculated back to the process. There are no waste streams for disposal from this step.

The third step takes crude titanium dioxide formed by the oxidation step and processes it by conventional methods to achieve desired pigment properties. The titanium dioxide slurried in water is surface treated and is then filtered, washed, dried, ground and packaged.

The filtrates and wash water are collected in a large settling tank to recover any titanium dioxide present, and the overflow containing dissolved salts ($NaSO_4$ and NaCl) is neutralized and discharged to two settling ponds. Solids are settled out in these ponds, and a final control is made for pH to insure that all discharges conform to specific limits.

[redacted]terials

[redacted]ile Ore
[redacted]furic Acid
[redacted]lorine
[redacted]ustic Soda
[redacted]itrogen
6. Oxygen
7. Carbon
8. By-Product HCl

BARIUM AND STRONTIUM PROCESS DESCRIPTION

Prior to SCM's ownership of Plant 1, Sherwin-Williams operated a barium and strontium manufacturing process. SCM did not operate this process.

Strontium or barium carbonate was essentially produced in the same process with changes in operating conditions of manufacturing equipment. Both were converted from ores, celestite for strontium carbonate and barytes for barium carbonate. In manufacturing, either celestite or barytes ore (blended with coke) was reduced in a kiln, then milled prior to a carbon dioxide precipitation-crystallization step. The strontium or barium carbonate product was then separated, washed, dried, screened and packaged.

Principal Raw Materials

1. Celestite Ore or Barytes Ore
2. Coke
3. Soda Ash

PLANT 2

$TiO_2/TiCl_4$ PROCESS DESCRIPTION

For the period from November 1983 through November 1984 the manufacturing processes were the same as those described in Request 19.

Since December 1984 the rate of waste generation has reduced [redacted] 200 $yd^3/10^6$ pounds of $TiCl_4$ production or [redacted] tons/year.

[redacted] to December 1984 the Chlorine Recovery system utilized [redacted] to remove water from gaseous chlorine. H_2SO_4 at 93% was put in the system and removed when H_2SO_4 concentration reached 87%. This H_2SO_4 was sold except in the coldest winter months when the freezing point of 87% H_2SO_4 becomes a problem. At those times it was shipped off-site for neutralization. This amounted to about 200 tons yearly.

Some TiO_2 is carried out of the process in waste water. This is pumped to the treatment unit and is included in the solid waste listed above.

21) Describe the storage, treatment and disposal practices for any by-product or wastes associated with each of the manufacturing processes described in response to Requests 18 and 19. This description should identify any use of drums, tanks, lagoons, ponds, waste piles, ditches, marshes, swamps, land treatment or disposal areas, public sewers, landfills, creeks, or waterways used or affected by such practices.

Response:

Plant 1

Process effluents from the TiO_2 operation are collected in acid brick trenches and the North Ditch and routed to a central neutralization basin. An agitator mixes these streams with sodium hydroxide to neutralize pH. The overflow from the mixing basin flows into two settling ponds (capacity 800,000 gallons each) arranged in series where the water is clarified by settling. The overflow from the settling ponds is into Fields Brook.

Waste solids from chlorination are concentrated in water and stored in two (2) brick-lined tanks (35,000 gallons capacity). Normally this waste is hauled off-site for treatment and disposal by a private contractor. Occasionally, this waste is taken to Plant #2 for treatment as process wastewater.

35. [redacted] the location and size of each lagoon, pond, waste pi[redacted]t that has existed on the SCM property and it[redacted] each lagoon, pond, waste pile, trench or pit descri[redacted]

a) Any hazardous substances that may be or have been contained in them.

b) The dates of each structure's existence and use.

c) Any construction properties of each pit, pond, waste pile, trench or lagoon which would help prevent the release of materials from it.

d) If not in use now, explain how it was closed or has been modified and the present use of the area.

e) Any pictures, sketches or maps of these facilities.

Response:

Plant 1

Refer to the attached sketch, "Ashtabula Site Plot Plan," Document 1528, for a map showing the location of the below-listed facilities.

1. Pond. SCM believes that this pond was used by Sherwin-Williams in connection with its barium-strontium operations from 1968 to 1972 when it was closed. Its apparent function was to serve as a temporary holding basin for settling pond dredgings. Its contents have not been sampled. Its estimated size is 200,000 gallons. The manner of its construction and closure is unknown. The pond is located on the highly impermeable clay which exists throughout Plant 1.

2. Settling Pond. This pond was used by Sherwin-Williams for treating wastewater by sedimentation from

[redacted] operations from 1968 to 1972 when it was [redacted]ity is estimated to be 100,000 gallons. It was [redacted] with an earthen berm and concrete cell dividers. [redacted] manner of its closure is unknown. The pond is located on the highly impermeable clay which exists throughout Plant 1. Its contents have not been sampled.

3. Waste Pile. This waste pile was used by Sherwin-Williams for the disposal of wastes from its barium-strontium operations during the period of those operations from 1968-1972. The method of closure is unknown. The method of construction is unknown; however, the pile is located on the highly impermeable clay which exists throughout Plant 1. Its size is estimated to be 50,000 cubic yards. Leachate tests were conducted by SCM on samples from the pile. SCM is unable to locate copies of those test results, except for barium which are listed on Document 2264.

4. North Holding Basin. This is a 4,000,000 gallon pond which is part of the plant's wastewater treatment facilities. It is used for retention of settling pond sediments and as an emergency retention pond for wastewater. It was constructed in 1972 and remains in use. The pond is located over the highly impermeable clay which exists throughout the plant. It has an 18-inch thick firm clay lining on the bottom and sides. The sides are also covered with crushed stone. Sampling data of the contents of this pond have been previously submitted to EPA and Ohio EPA.

[redacted] Holding Basin. This 500,000 gallon pond was used in [redacted]. Its use was the same as the north holding basin [redacted] excavated out of the highly impermeable clay which exists throughout the plant. It was closed by draining and filling with clay from adjacent areas. Sampling data of the contents of this pond have been previously submitted to EPA and Ohio EPA.

6 and 7. Settling Ponds. These two ponds, each with a capacity of 800,000 gallons, were constructed in 1968 and remain in use for wastewater treatment purposes. The ponds are located over the highly impermeable clay which exists throughout the plant. Each pond has an 18-inch thick firm clay lining on the bottom and sides. The sides are also covered with crushed stone. Sampling data of the contents of these ponds have been previously submitted to EPA and Ohio EPA.

8 and 9. Surge Ponds. These ponds were constructed in 1972 and continue in use to provide collection of raw water (ASHCO) [redacted] sediments. The west pond has a capacity of 20,000 gallons. The east pond has a capacity of 70,000 gallons. These bermed ponds were excavated from the highly impermeable clay which exists throughout the plant. They have been sampled but SCM is unable to locate copies of the analysis of those samples.

10. Waste Pile. Dust from the dust collectors on the chlorinator unit are temporarily stored in the southeast corner of the plant prior to off-site disposal. This storage pile was

Holding Basin. This 500,000 gallon pond was used in [redacted]72. Its use was the same as the north holding basin. It was excavated out of the highly impermeable clay which exists throughout the plant. It was closed by draining and filling with clay from adjacent areas. Sampling data of the contents of this pond have been previously submitted to EPA and Ohio EPA.

6 and 7. Settling Ponds. These two ponds, each with a capacity of 800,000 gallons, were constructed in 1968 and remain in use for wastewater treatment purposes. The ponds are located over the highly impermeable clay which exists throughout the plant. Each pond has an 18-inch thick firm clay lining on the bottom and sides. The sides are also covered with crushed stone. Sampling data of the contents of these ponds have been previously submitted to EPA and Ohio EPA.

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10. Waste Pile. Dust from the dust collectors on the chlorinator unit are temporarily stored in the southeast corner of the plant prior to off-site disposal. This storage pile was

first used for this purpose in 1969. This pile is located on the impermeable clay which exists throughout the plant. The size of the pile varies. The pile consists of ore or coke fines.

Plant 2

Listed below are the ponds, thickener and clarifier located at Plant 2. All ponds have been and are used for wastewater treatment purposes and are located in the highly impermeable clay which underlies Plant 2. Maps showing the location of those ponds are attached. See Document 1974-82.

TiO_2 Area

Pond 1	50' x 135' x 11' Deep	Built - 1963
Pond 2	50' x 135' x 11' Deep	Built - 1963
Pond 3	50' x 135' x 11' Deep	Built - 1963
Pond 4	50' x 135' x	
Pond 5	Northwest Pond 130 x 180 x 9' Deep	Built - 1972

$TiCl_4$ Area

North Pond	20' x 200' x 13' Deep	Built - 1957
South Pond	20' x 200' x 13' Deep	Built - 1957
Thickener (BG-119)	185 Ft. Diameter x 15' Deep	Built - 1972
East Pond	85' x 90' x 5 Ft. Deep	Built - 1972
Clarifier	22' x 106' x 10'9" Deep	Built - 1967

Acme Scrap Iron & Metal		TWMIC Index
AS-101	D. Barna and D. Easterling's "Toxics Summary Report, Revised Draft" PCB's at 114 ppm in burn area, " " 189 " " discharge; only PCB source on Field's Brook.	1982
AS-102	PCB's at 50 ppm in Field's Brook discharge	1981
AS-103	Storm sewer route to Field's Brook from AS.	1982
AS-104	Oils burned beside warehouse; oil slick noted on Field's Brook near Acme Scrap.	1981
AS-105	PCB oils passed to Field's Brook; 240 ppm in oil boom; discharge level 5 ppb.	1982
AS-106	Oil dicharge map from Acme to Field's Brook	1981
AS-107	Oil escaping from oil boom, 5th time in 6 weeks.	1981
AS-108	PCB's at 23.8 and 71.8 ug/g (mg/kg) in storm sewer by Acme spill.	1981
AS-109	Storm sewer map/ Acme to Field's Brook.	1982
AS-110	Att. 36 to D.Barna and D.Easterling's "Toxics Summary Report," PCB's at 189 ppm (Archlor 1254) in discharge.	1982
AS-111	PCB's in Outfall: 350 ppb " " soil : 114 "	1985
AS-112	PCB pools noted on Acme property, draining to Field's Brook.(Compliance Inspection Report, USEPA); PCB's at 26 ppm in oil and water, " " 32 " " soil. Map with link to Field's Brook.	1982
AS-113	Ohio EPA orders Acme to clean up PCB laden oil from boom area daily.	1981

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

March 1, 1982

PCB Inspection at Acme Scrap Iron and Metal in Ashtabula, Ohio

Daniel C. Watson, Physical Scientist
THRU: A.R. Winklhofer, Director, EDO

Karl Bremer, Toxic Substances Coordinator, 5AH

At the request of Melinda Becker (OEPA-NEDO) the writer conducted a PCB inspection at Acme Scrap Iron and Metal at 2101 State Road in Ashtabula on May 21, 1981. Ohio on May 21, 1981. Ms. Becker's request was prompted by several reports from Ashtabula residents about the subject company burning PCB transformers. The company reportedly burns the transformers in order to recover copper, aluminum, and steel for sale as scrap metal.

At the facility the writer and Ms. Becker talked to Sam Simon, President of Acme Scrap. Mr. Simon stated that he does not now handle nor has he ever handled PCBs. After this interview the writer, along with Mr. Simon, Ms. Becker, and Dennis Lee (OEPA), toured the facility and the following samples were collected:

Sample Number	Type	Location (see attached map)
[redacted]		[redacted]
81EW10S02	Soil	Oil Storage Area
[redacted]		[redacted]
81EW10S04	Sediment and Oil	Sediment Below Discharge

Sample 81EW10S01 consisted of soil collected in the area where transformers are reportedly burned. There were pieces of burned transformers in this area and the ground was charred. Sample 81EW10S02 consisted of oil soaked soil collected in an oil storage area. The oil in this area is stored in 55 gallon drums and housekeeping is poor. Samples 81EW10S03 and 81EW10S04 were collected at the point where the facility's storm sewer system discharges into Fields Brook. There is an absorbent boom around this area to keep the massive amount of oil being discharged from this pipe from entering the waterway. The water sample collected from this area contained about 1/4 to 1/2 congealled oil.

Laboratory analysis results from these samples were received at EDO on January 29, 1982, and showed the following:

[redacted]

81EW10S02 - < 5 ppm PCB

[redacted]

81EW10S04 - < 5 ppm PCB

These results indicate that there have been PCB items in the burn area. Also, PCB oil is being handled at this facility and is discharged to Fields Brook via the facility's storm sewer system. This facility has no NPDES permit. Inspectors from the Ohio EPA have

CONCURRENCES

SYMBOL	EDO							
SURNAME	Watson	AW						
DATE	2/1/82	3/1/82						

5.

PCB Inspections

a. ACME Scrap Iron and Metal (Appendix, Attachment 36)

In May 1981 a PCB inspection was conducted in response to several citizen complaints of the company burning PCB transformers. The company reportedly burns the transformers to salvage scrap metal.

Grab samples were at the suspected transformer burn area (soil), oil storage area (soil), storm sewer discharge to Fields Brook (water and oil), and the sediment below the storm sewer discharge to Fields Brook (sediment and oil).

[redacted]

Ohio EPA collects samples at the storm sewer discharge on a regular basis with PCB [redacted]

An intensive follow-up PCB survey is scheduled for the end of March 1982 to determine the sources and pathways of PCB contamination of

Table V-~~3~~ 4

U.S. Environmental Protection Agency
Eastern District Office
Ashtabula Area Investigations
(January 1980 - ~~November 1981~~ MARCH 1982)

Facility	Type of Investigation RCRA-Recon	CEI	CSI	CSI-Toxic	PCB	UST
Olin Corporation	--	--	--	X	--	--
SCM Corporation	--	--	--	X	--	--
General Tire & Rubber	--	--	--	X	--	X
RMI - Metal Reduction	--	X	--	--	--	--
RMI - Extrusion	X	--	--	--	--	--
IMC Corporation	X	--	--	X	--	X
Detrex	X	--	--	X	--	--
True Temper - Saybrook	X	--	--	--	--	--
True Temper Sports - Geneva	X	--	--	--	--	--
Rockwell International - Brake	X	--	--	--	--	X
Rockwell International - Plastics	X	--	--	--	--	--
G&W Natural Resources	X	X	--	--	--	--
Reserve Environmental Services	X	--	--	--	--	--
Diamond Shamrock - Semi	X	--	--	X	--	--
Union Carbide - Ferro Alloys	--	--	X	--	--	--
Union Carbide - Wire	--	--	X	--	--	--
Union Carbide - Linde	--	--	X	--	--	--
[redacted]	--	--	--	--	[redacted]	--
[redacted]	--	--	X	--		--
[redacted]	--	--	X	--	--	--
Miscellaneous Sites	X	--	--	--	--	--
Total	11	2	#5	#6	1	3

*Yet ~~to be performed~~

(3) Add → DETREX WAS THE SUBJECT OF A CSI - TOXIC SURVEY IN 1981. ORGANIC ANALYSES REVEALED THE PRESENCE OF CHLORINATED ORGANICS IN OUTFALL 002, SURFACE RUNOFF, AND A SEDIMENT SAMPLE.

IN PARTICULAR, ~~SURFACE~~ ORGANICS FOUND IN ELEVATED CONCENTRATIONS IN OUTFALL 002 WERE TRICHLOROETHENE, 1,1,2,2- TETRACHLOROETHANE, TETRACHLOROETHYLENE, 1,2-DICHLOROETHENE. ORGANICS FOUND IN THE SEDIMENT GRAB SAMPLE INCLUDED HCB, HEPTACHLOR, AND HCBD.

Add e →

e [redacted] SOURCE CONTRIBUTING [redacted] PCB's HAVE BEEN FOUND ENTERING FIELDS BROOK THROUGH THIS SEWER. ANALYSIS OF SEDIMENTS ON ACME SCRAP PROPERTY EVIDENCED PCB's IN AREAS WHERE PROCESSING OF ~~[redacted]~~ TRANSFORMERS IS SUSPECTED.

COPY

Toxics Summary Report
Ashtabula Problem Area

REVISED
~~February 1981~~
APRIL 1982

David R. Barna
Donald F. Easterling

United States Environmental Protection Agency
Region V
~~Environmental Services Surveillance and Analysis~~ Division
Eastern District Office
Westlake, Ohio

NPDES to NJ

TDD# F5-8110-7
Fields' Brook

feet. The area is really a wetland swamp created when the old pond area on the eastern side of the bridge was filled-in adjacent the Detrex Corporation side of the brook.

Two of the five branch tributaries are found in this section. The northern branch empties into the main water body about 50 feet west of stake number 13. The first of the two southern branches enters at the eastern side of the State Route 11 bridge. Again, there are a number of out-falls, discharges to the brook at points along the second segment. Two of these out-falls, one on either side of the State Road bridge, are covered first. The east side out-fall is a drainage culvert running south about 1500 feet to Acme Scrap. [redacted] only been partially contained by an inflated plastic boom surrounding the 5 by 10 foot area, (see photo page no. 26). During a heavy rain storm on November 5, 1981, the writer noted a large oil slick leaving the boom and traveling downstream. Although this boom area is cleaned from time to time, the oily admix is still draining into the brook. The second discharge on the west side of the bridge is a common culvert discharge point for three area plants, (RMI sodium plant, Diamond Shamrock, and Detrex). The water discharge from this out-fall is constant and clear. The last of the out-falls is located adjacent to stake number 12. This discharge is non-contact process cooling water from the RMI extrusion plant.

There are four landfills reported to exist adjacent to this segment of the drainage basin, three south, and one north of the streambed, but writer did not view these areas.

The third section of consideration stretches between State Route 11, and Columbus Avenue. This segment has six measurement points, and is the only area of the streambed which is reminiscent of a normal brook stream. The area is very hilly, and the streambed roams through the valley. The hills reveal many areas of rock out-croppings, and the streambed is at

Has been investigated by OEPA
Re: Solid waste files.
This is more clarifier processed sludge than anything else.

further evaluation by either Ohio or U.S. EPA. The first of these is a five acre, uncovered, flat dome of solid titanium tetrachloride distillation bottom waste which lies on the Gulf and Western TiCl4 plant property. This uncovered landfill is located east of the plant, north of Middle Road, and about 100 feet south of the brook. The surface of this landfill is soft, spongy, and free of vegetation. It is felt by writer that any chlorinated by-products still associated with the solid waste may migrate and concentrate at the bottom of this landfill. Therefore, because of its proximity to the brook, it may contaminate the stream after the waterway is cleaned up. The third landfill lies on Detrex Corporation land, just north of the brook and east of State Road. Again, this filled area is flat and free of vegetation. However, there is an organic gas emitting from the cover-soil which was detected and reported in the attached air monitoring memo. The last of these four landfills also lies on Detrex Corporate land. It is located behind the Detrex plant and adjacent to the northern tributary of this basin. Ohio EPA has reported receiving samples from neighboring property containing very high levels of chlorinated hydrocarbons which are suspected of migrating from this landfill.

Conclusion is speculative

what happened to #4 landfill

this is not specific compound analysis requested

same as different d

The second section of consideration stretches between State Road and State Route 11. This basin segment has six measuring points along its 3100 foot length. The similarities between these first two areas are very striking. The streambed has all the same erosion problems caused by the fast moving water such as channeling and pocketing of the streambed bottom soil, rapid silt laden water, sediment pools and beds, and soft U-shaped banks which are heavily overgrown. The main difference between the two segments is that the latter is much wider and averages about 25 feet in width after stake number 13, near the mouth of the north branch. The depth of water-to-streambed is still erratic throughout this segment and varies between 11 to 30 inches. The exception to the above observations lies just west of the State Road bridge. Here the streambed separates into right and left branches and joins again after about 300

* The velocity of the stream, and related sediment load, varies with flow changes. Was this survey conducted during high, medium, or low flow conditions? Sediment deposition or scouring depend upon the varying stream velocities. Agree

TDD# F5-8110-7
Fields' Brook

in depth-to-streambed with readings varying from 6 to 33 inches, (see attached measurement table). The reason for this variation was due to the many large wash out channels, pockets, and sediment beds throughout the streambed in this area. The sediment beds are generally upstream of the Olin plant's out-fall number one, and downstream of Gulf and Western's out-fall number one. There existed a thin layer of sediment between these points, but it cannot be called a sediment pocket. The bottom channeling and pocketing varied in depth from 10 to 20 inches, and some of the channeling extended for about 50 feet in length. The waters of the stream throughout this section contained a moderate to heavy amount of suspended solids due to rapid water movement. Most of the erosion pockets and bends in the streambed were acting as classifier for the silt laden water, and therefore, creating sediment pools and later sediment pockets. Again, the streambed side walls are U-shaped in nature and heavily eroded.

depends on conditions don't agree!

classifier?

The streambed's abnormal condition is largely due to erosion caused by a very large volume of water constantly being discharged to the drainage basin by eleven chemical plants neighboring the brook. This discharge has all but rendered this streambed into an industrial drainage ditch. Five of these plants with six out-falls are located east of State Road. And, five out-falls lie within a 1500 feet section of the stream bank. The plants with out-falls in this section are SCM, Olin, (which is temporarily closed), General Tire, and two Gulf and Western plants. This large volume discharge is further complicated by a drastic 60 foot drop in elevation over the length of the streambed thereby causing a very rapid moving stream. This force is the cause for the heavy erosion to the brook's banks and underlying soil bed.

not all chemical plants or not all discharge to Fields!!

There are nine landfill areas adjacent to the Fields' Brook drainage basin. Four of them were viewed by writer, and are located between the headwater fork and State Road. The cinder landfill cited earlier in this report is of least concern. The remaining three landfills require

102

Summary
Objective?
Purpose?
Scope?
Conclusions?

ecology and environment, inc.
223 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60606, TEL. 312-663-9415
International Specialists in the Environmental Sciences

DATE: November 24, 1981

TO: File

FROM: Paul Hess

SUBJECT: Ohio / TDD# F5-8110-7
Ashtabula / Fields' Brook
Field Inspection Report

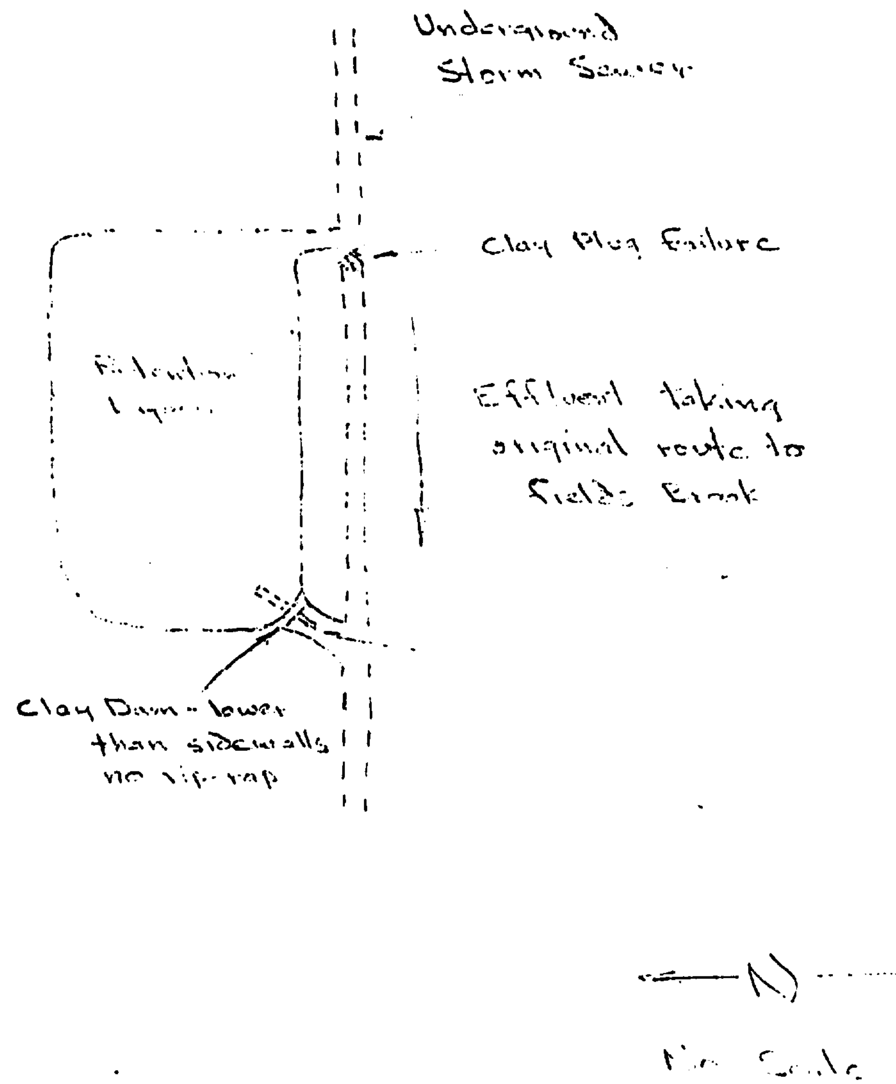
During the period of November 3rd through the 12th of this year, writer assisted by a work party of five, conducted an on-site investigation of the Fields' Brook drainage basin located in Ashtabula County, Ohio. The work party consisted of four FIT members, one state employee, and one industrial representative. Steve Tuckerman of the Ohio EPA's, Northern District Office, and Joe Holman, Environmental Engineer for RMI Company, Niles, Ohio, were the non-FIT members.

The Fields' Brook drainage basin has an overall length of five and one half miles. The two and one half mile long main body of water generally flows in a westerly direction before emptying into the harbor area of the Ashtabula River. The basin has five tributary streams associated with the main body of water which adds another three miles to its length. The two eastern branches in the area of the headwaters form a half mile fork to the main water body. The two southern and one northern tributaries of this basin are each less than one mile long, but as a whole are two miles in length (see attached site map).

It was the function of this investigation to secure a streambed profile along the main body of water as well as along the northern tributary so that future sediment core sampling and preclean-up activities can be planned by the U.S. EPA. In order to accomplish this end, a preliminary air monitoring inspection for respiratory safety was conducted above the main water body at the access points of three out of seven bridges that span this basin. It was concluded from the air testing program that a respiratory hazard did not exist for the work party (see attached memo to file dated November 19, 1981 by Mr. Bartholomew).

1006

Acme Corp.
Oil Retention Lagoon



0R0851 CEL. 6/16/86

INSPECTION NOTES

Re: Acme Scrap
Ashtabula County
Industrial Wastewater

Visited Acme Scrap on June 2, 1982, with Dave Barna, USEPA, to inspect new oil retention lagoon. Checked with Sam Simon and informed him of our intentions.

Lagoon observed. Slight oil sheen on it at influent end. Lagoon facility improperly constructed as inflow was bypassing lagoon and entering original discharge route. Also dam at effluent end did not contain rip-rap as a protecti cover and was lower in elevation than the rest of the pond so it could serve as a spillway should levels ever get that high. See attached drawing, Sam Simor informed of findings. Larry Tackett shown problems. Explained to him that remaining storm sewer that allows bypassing has to be removed and properly backfilled or adequately plugged with concrete.

Also explained that dam had to be raised so that if levels got to the overflow point, any discharge or spill would spread out over the adjacent field area rather than go immediately down the storm sewer. Explained the need for riprap too. Simon and Tackett agreed they could accomplish above by the end of the following week. I asked them to send me a letter confirming the completion of such work. Simon said he would.

Follow-up telephone conversation to Simon on June 18, 1982. He said storm sewer had been broken into and plugged with blue clay. Had held during recent heavy rains. Dam not yet raised or rip-rap placed. He will talk to Tackett to whom I explained what to do.

Lagoon reportedly contains very small amount of oil.

Dennis E. Lee, P.E. DEL
Group Leader
Division of Industrial Wastewater

DEL:mjo
June 21, 1982

cc: S. Tuckerman, NEDO

Inter-Office Communication

TO: Dennis Lee, Industrial Wastewater DATE: August 20, 1981

FROM: Harry Courtwright, Surveillance HC(cw)

SUBJECT: Acme Scrap Oil Boom on Fields Brook

[redacted] on Fields Brook by Steve Tuckerman and myself immediately downstream of a full Acme Scrap oil boom on Tuesday, August 18, 1981. On Wednesday, August 19, 1981, the site was revisited by Steve Tuckerman, Dave Stroud, and myself. Two employees of Acme Scrap were discovered drawing oil from behind the boom into buckets and transferred the oil into 55-gallon drums. When Tuckerman inquired about the destination of the drums, one of the Acme Scrap employees stated that the oil in the past had been poured out beside the warehouse [redacted]

HC:cll

cc: Chris Frazier, OAPC
Steve Tuckerman, Surveillance

C2857

VI. Samples

The following samples were collected (Figure 1):

S01 was an oil plus water sample taken from a trench in the northeast section of the property at the juncture of a roadway and railroad track. The surface of which was covered with a heavy layer of oil.

S02 was taken from an area west of Building I (see attachment) where a large quantity of insulators, similar to those used on transformers and capacitors, were strewn about. In fact several capacitors were photopraphed in this same area.

S03 was voided.

S04 was taken from an opening in the main discharge line from the property located at the proposed treatment lagoon. There was an oil film on the water.

S05 was taken from a central catch basin located on the west side of Building I and midway relative to the length of Building I. Water with an oil sheen was flowing through this basin.

S06 was taken from a manhole at the juncture of State and Middle Roads. The sample source was verified by introducing Rhodamine B dye into the sewer at the S04 sample point and detecting same at the manhole. This was done after samples were drawn. The dye was introduced at 12:06 p.m. and reached the manhole at 12:21 p.m.

[redacted] was taken from the mouth of the discharge line and inside the oil boom at Fields Brook. The oil behind the boom was of the same color and consistency as that collected at S01. Following the sampling the same dye introduced at S04 appeared at 12:37 p.m., thus establishing that the Acme discharge travels directly to Fields Brook.

S08 was a sample drawn from a ground runoff line that also discharges into Fields Brook inside the oil boom area of confinernent.

[redacted] was a sample drawn from Fields Brook immediately outside of the oil boom and clearly discernable as a plume from under the boom.

The following PCB concentrations were detected:

Sample Number	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCB	Sample Type
S01	19 ppm	< 5 ppm	7 ppm	< 5 ppm	26 ppm	Oil and Water
S02	< 5 ppm	< 5 ppm	20 ppm	12 ppm	32 ppm	Soil
S04	< 5 ppb	< 5 ppb	0.7 ppb	< 0.5 ppb	0.7 ppb	Water
S05	< 0.5 ppb	< 0.5 ppb	0.8 ppb	< 0.5 ppb	0.8 ppb	Water
[redacted]	< 0.5 ppm	< 0.5 ppm	240 ppm	< 0.5 ppm	[redacted]	and
[redacted]	< 0.5 ppb	< 0.5 ppb	6.5 ppm	< 0.5 ppb	[redacted]	Enulsufied Oil and Water Layer
S08	< 0.5 ppb	< 0.5 ppb	0.8 ppb	< 0.5 ppb	0.8 ppb	Water
[redacted]	< 0.5 ppb	4.6 ppb	< 0.5 ppb	0.4 ppb	[redacted]	ater

Sample S06 was broken in shipment from CRL to a contract laboratory. Sample S01 and S07 were compared by IR and FID/TSD at the laboratory. IR indicated no detectable differences between samples and GC showed significant similarities between the samples.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: June 9, 1982

SUBJECT: PCB Compliance Inspection at Acme Scrap Iron and Metal at 2101 State Road in Ashtabula, Ohio

FROM: Daniel C. Watson, Physical Scientist
THRU: A.R. Winklhofer, Director, EDO

TO: Karl E. Bremer, 5HT
ATTN: Sheldon Simon, 5HT

Attached is copy of the PCB inspection report for Acme Scrap Iron and Metal, Ashtabula, Ohio conducted on March 30, 1982. This inspection was conducted at the request of your office and the Ohio EPA. During the inspection the inspectors discovered the following:

1. Hundreds of insulators from capacitors and transformers plus two banks of large drained PCB capacitors located in an area where transformers are reportedly burned and dismantled.

[redacted]

3. A pool of oil on the property similar to the PCB laden oil found at Fields Brook.

On May 5, 1982, the writer and Charles Beier of EDO, took photographs of a large mound of transformer casings at this facility. These photographs were taken from Middle Road and copies will be sent to your office at a later date.

David Barna, U.S. EPA - EDO, visited the facility on June 2 to look at the facility's newly constructed oil separator. Mr. Barna found that the separator was improperly constructed and not working efficiently.

Attachments

cc: Ed Di Domenico, 5WQC

EPA FORM 1320-6 (REV 3-75)

020864

Report on the Inspection to Determine Compliance with the PCB Disposal and Marking Regulations

Acme Scrap Iron and Metal
2101 State Road
Ashtabula, Ohio

Performed by:

U.S. Environmental Protection Agency
Environmental Services Division
Eastern District Office
25089 Center Ridge Road
Westlake, Ohio 44145

Inter-Office Communication

TO: Dennis Lee, Industrial Wastewater DATE: June 25, 1981

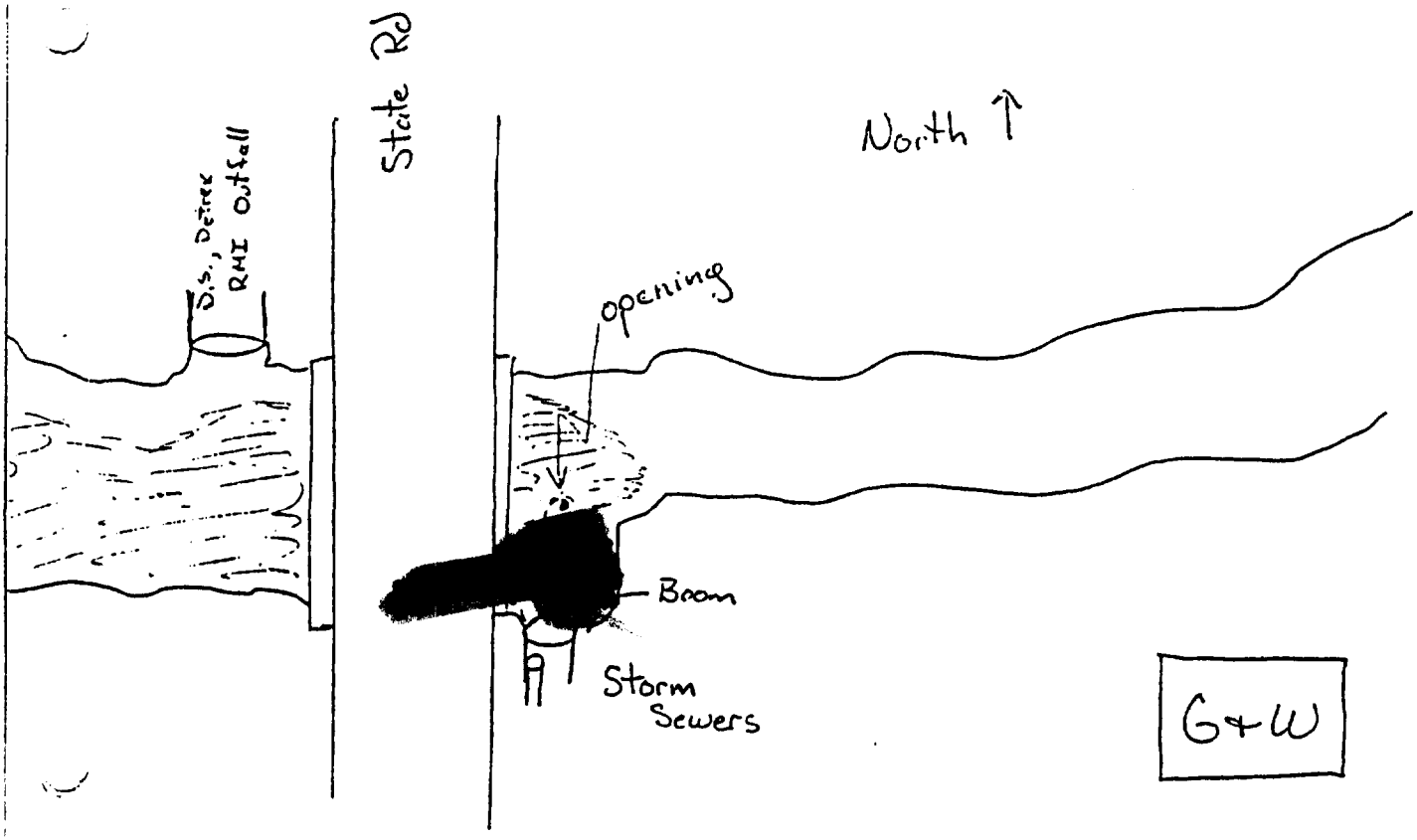
FROM: Steve Tuckerman, Surveillance

SUBJECT: Acme Scrap Oil Boom

The oil boom in Fields Brook at State Road was not working properly on June 23, 1981, and was allowing oil to escape to Fields Brook. This oil covered 95% of the surface area of the brook at State Road and was observed at State Route 11 and 15th Street. The boom was laying on top of two pipes that are used for securing the boom and the bottom of the boom was three inches above the water's surface. There was very little oil behind the boom and most of that was concentrated near the opening. Eddy currents were carrying the oil through the opening and out to the brook. I repositioned the boom and it was working properly when I left at 11:30 a.m.

ST:cll

cc: Jim Irwin, Emergency Response



Inspection Notes

Re:

Acme Scrap
Ashtabula County
Industrial Wastewater

On the morning of June 23, 1981, approximately 9:00 A.M. inspected oil boom at Acme Scrap storm sewer outlet. Boom contained a heavy amount of oil, but was also allowing a sufficient amount to escape underneath to cause a very visible oil slick on Field's Brook. Stopped in at office of Acme Scrap and informed Sam Simon, Owner, and Joe Kemp, Vice-President, of the situation. They said they weren't surprised that there was a good accumulation of oil since they had received heavy rains. They also said that they would get somebody down to the boom for maintenance and to [redacted] that this [redacted] May 21, 1981; joint inspection with USEPA. Boom improperly placed. See Mark Baumgardner IOC of June 15, 1981, for discussion of No. 2, 3, 4.] Mr. Kemp said that they had planned on installing an oil separator but that the contractor had gone into the hospital. Mr. Kemp hoped that they could begin construction on the project in two (2) weeks.

Reinspected oil boom at approximately 4:00 P.M. in the afternoon. Evidence that equipment had been in area to remove oil, however, boom still contained a considerable amount of oil. Obvious sheen observed on Field's adjacent to and downstream of boom. Not very apparent as to how oil was escaping from boom. Later conversation with Steve Tuckerman, Surveillance, disclosed that he had observed the boom to be improperly placed that same day at around 11:30 A.M. (See his IOC of June 25, 1981).

cc: Jim Irwin, ERS/NEDO
Steve Tuckerman, Surveillance/NEDO

Ohio Department of Health

Industrial Chemistry Section

Environmental Sample Submission Report

Agency: OEPA
Division Program: DSW, DO — IV
Analysis Reported To: [ ] CO [ ] CDO [ ] SE [X] NE [ ] SW [ ] NW

Laboratory: [ ] Central [ ] SE [ ] NE [ ] SW [ ] NW
Sample Number: 8-8194
Analyst: [illegible] Supervisor: 3-26-81 J Green
Date Received:
Date Reported: 4/9/81

Sample Identification

Station: State St. Storm Sewer
ID Number: SC, — — — — — — —
Address: (S.E. corner)
City: Zip:
County: Ashtabula Phone:
Collected By: Tuckerman

Grab Sample Date or Beginning Date of Composite Sample — Use Military Time

Year	Month	Day	Hour	Minute
81	03	23	10	45

Ending Date of Composite Sample — Use Military Time

Year	Month	Day	Hour	Minute	CVT	S T	TYP

Field Treatment
[ ] Filtered [ ] $CuSO_4 + H_3PO_4$
[ ] Iced [ ] H_2SO_4
[ ] NaOH [ ] HNO_3
[ ] Other (Explain)

Additional Information — Analyst Remarks — Non Routine Analytical Requests

Spill Acme Scrap
Field Blank

Radioisotopes

[ ] Alpha, Total pCi/l	P1501
[ ] Alpha, Diss pCi/l	P1503
[ ] Alpha, Suspd pCi/l	P1505
[ ] Beta, Total pCi/l	P3501
[ ] Beta, Diss pCi/l	P3503
[ ] Beta, Suspd pCi/l	P3505
[ ] Barium-140, Total pCi/l	P75030
[ ] Cesium-134, Total pCi/l	P28414
[ ] Cesium-137, Total pCi/l	P28401
[ ] Iodine-131, Total pCi/l	P28301
[ ] Potassium-40, Total pCi/l	P75038
[ ] Radium-226, Total pCi/l	P9501
[ ] Radium-228, Total pCi/l	P11501
[ ] Strontium-90, Total pCi/l	P13501
[ ] Strontium-89, Total pCi/l	P15501
[ ] Tritium, pCi/l	P7000

Volatile Organics

[ ] Chloroform, Total ug/l	P32106
[ ] Methylene Chloride, Total ug/l	P34423
[ ] Carbon Tetrachloride, Total ug/l	P32102
[ ] Bromoform, Total ug/l	P32104
[ ] Bromodichloromethane, Total ug/l	P32101
[ ] Dibromochloromethane, Total ug/l	P32105
[ ] 1,2 Dichloroethane, Total ug/l	P32103

Pesticides

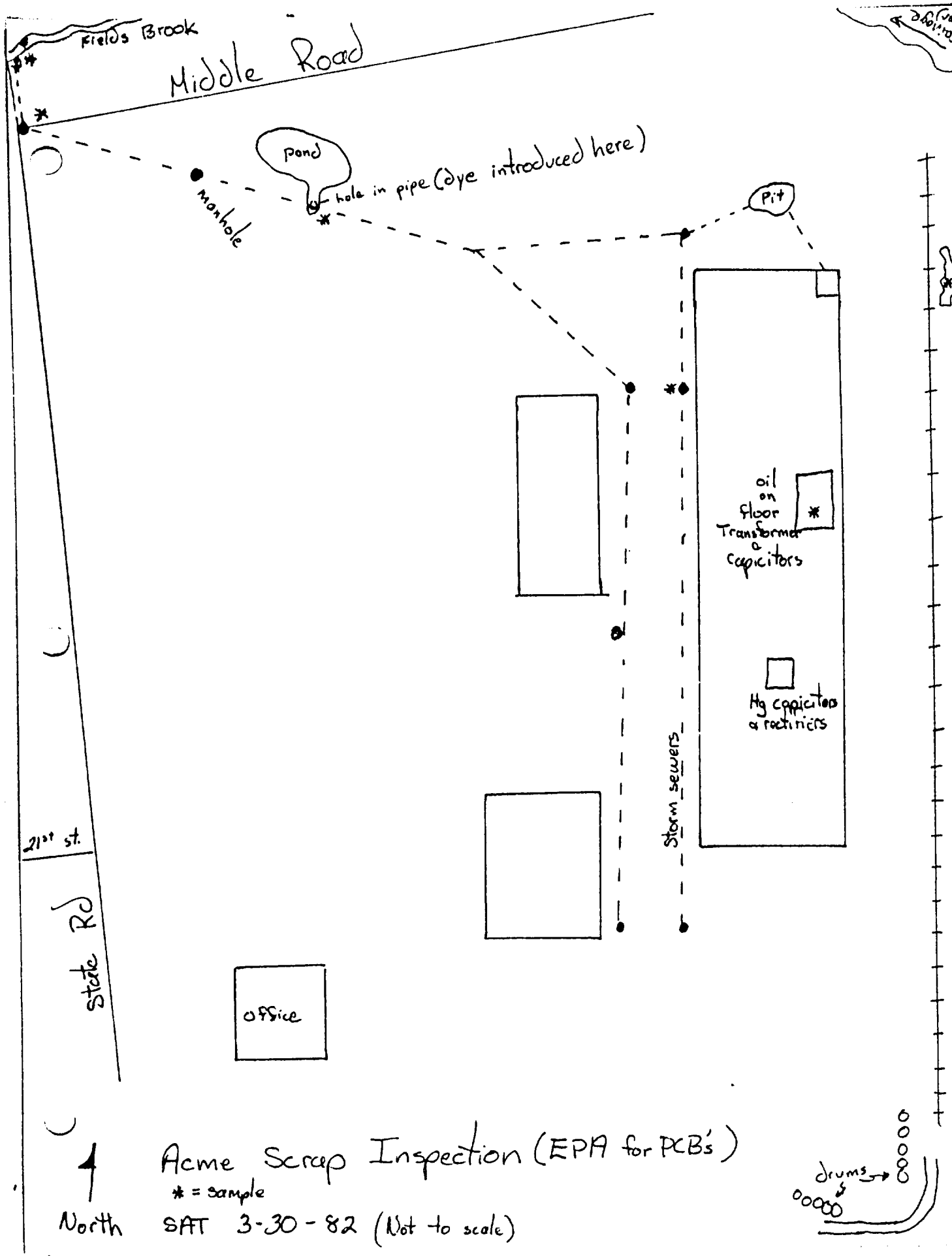
[ ] Aldrin, Wht Sampl ug/l	P39330
[ ] DDD, Wht Sampl ug/l	P39360
[ ] DDE, Wht Sampl ug/l	P39365
[ ] DDT, Wht Sample ug/l	P39370
[ ] Dieldrin, Wht Sampl ug/l	P39380
[ ] Chlordane, Wht Sampl ug/l	P39350
[ ] Endrin, Wht Sampl ug/l	P39390
[ ] Heptachlor, Wht Sampl ug/l	P39410
[ ] Heptachlor Epoxide, Wht Sampl ug/l	P39420
[ ] Lindane, Wht Sampl ug/l	P39782
[ ] Methoxychlor, Wht Sampl ug/l	P39480
[ ] Malathion, Wht Sampl ug/l	P39530
[ ] Parathion, Wht Sampl ug/l	P39540
[ ] Methyl Parathion, Wht Sampl ug/l	P39600
[ ] Toxaphene, Wht Sampl ug/l	P39400
[ ] 2,4-D, Wht Sampl ug/l	P39730
[ ] Silvex, Wht Sampl ug/l	P39760
[ ] BHC, Wht Sampl ug/l	P39340
[ ] Mirex, Wht Sampl ug/l	P39755
[ ] Diazinon, Wht Sampl ug/l	P39570

Special Parameters

[X] PCB, Wht Sampl ug/l	P39516
[ ] Chlorophyll A, ug/l	P32709
[ ] Phenols, ug/l	P32730
[ ] Sample Purpose	P71999
[ ] Sample Code	P1[illegible]

Distribution: 1 - Data Processing 2 - Central Office 3 - District Office 4 - Owner 5 - Laboratory

(4989-32) Ohio Department of Health


Fields Brook
Middle Road
pond
hole in pipe (dye introduced here)
Manhole
Pit
oil on floor Transformer & capicitors
Hg capicitors & rectifiers
Storm sewers
21st st.
State Rd
office
drums
North
Acme Scrap Inspection (EPA for PCB's)
* = sample
SAT 3-30-82 (Not to scale)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

March 1, 1982

PCB Inspection at Acme Scrap Iron and Metal in Ashtabula, Ohio

Daniel C. Watson, Physical Scientist
THRU: A.R. Winklhofer, Director, EDO

Karl Bremer, Toxic Substances Coordinator, 5AH

At the request of Melinda Becker (OEPA-NEDO) the writer conducted a PCB inspection at Acme Scrap Iron and Metal at 2101 State Road in Ashtabula on May 21, 1981. Ohio on May 21, 1981. Ms. Becker's request was prompted by several reports from Ashtabula residents about the subject company burning PCB transformers. The company reportedly burns the transformers in order to recover copper, aluminum, and steel for sale as scrap metal.

At the facility the writer and Ms. Becker talked to Sam Simon, President of Acme Scrap. Mr. Simon stated that he does not now handle nor has he ever handled PCBs. After this interview the writer, along with Mr. Simon, Ms. Becker, and Dennis Lee (OEPA), toured the facility and the following samples were collected:

Sample Number	Type	Location (see attached map)
81EW10S01	Soil	Transformer Burn Area
81EW10S02	Soil	Oil Storage Area
[redacted]	[redacted]	[redacted]
81EW10S04	Sediment and Oil	Sediment Below Discharge

Sample 81EW10S01 consisted of soil collected in the area where transformers are reportedly burned. There were pieces of burned transformers in this area and the ground was charred. Sample 81EW10S02 consisted of oil soaked soil collected in an oil storage area. The oil in this area is stored in 55 gallon drums and housekeeping is poor. Samples 81EW10S03 and 81EW10S04 were collected at the point where the facility's storm sewer system discharges into Fields Brook. There is an absorbent boom around this area to keep the massive amount of oil being discharged from this pipe from entering the waterway. The water sample collected from this area contained about 1/4 to 1/2 congealled oil.

Laboratory analysis results from these samples were received at EDO on January 29, 1982, and showed the following:

81EW10S01 - 114 ppm PCB Aroclor 1254

81EW10S02 - < 5 ppm PCB

[redacted]

81EW10S04 - < 5 ppm PCB

These results indicate that there have been PCB items in the burn area. Also, PCB oil is being handled at this facility and is discharged to Fields Brook via the facility's storm sewer system. This facility has no NPDES permit. Inspectors from the Ohio EPA have

CONCURRENCES

SYMBOL	EOO						
SURNAME	Watson	AW					
DATE		3/1/82					

collected samples of this discharge on a bimonthly basis and according to Mark Torf (OEPA) have found concentrations ranging from 100-500 ppm.

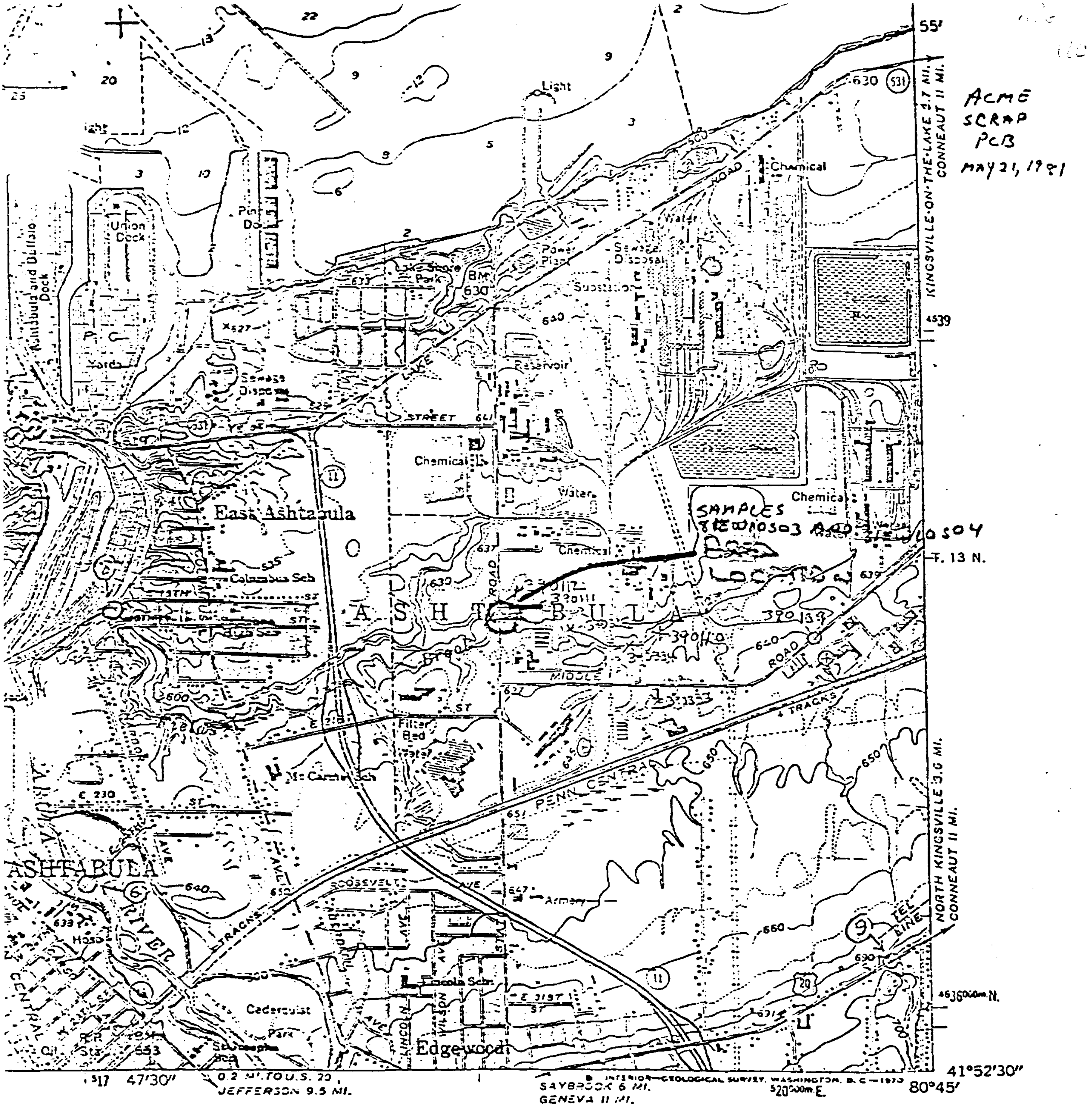
Three large utility transformers were at the facility during this inspection. Mr. Simon of Acme Scrap stated that they came from the Cleveland Electric Illuminating Company's Miles Service Center and are waiting to be scrapped. Mr. Simon stated that he had no documentation showing that these are not PCB transformers but "he knows that CEI would not send him PCB transformers". The writer copied the make and serial numbers off the transformer name plates. This information was given to Dan Rice of CEI on May 22, 1981 and Mr. Rice said he would see if the company had PCB test results for these transformers. Mr. Rice has not as yet done this.

An intensive survey of Acme Scrap has been scheduled for the week of March 29, 1982 to determine the source of the facility's continuous PCB discharge to Fields Brook and the extent of the facility's PCB contamination. Oil samples will also be collected at all storage areas and from any transformers on the property.

cc: Ed DiDominico, 5WQ-13

DCW/cak:3/1/82

CONCURRENCES								
SYMBOL	E00							
SURNAME	Watson							
DATE	3/1/82							



1 MILE

7000 FEET

KILOMETER

ROAD CLASSIFICATION

Medium-duty ____ Light-duty ____

Unimproved dirt - - - - -

U. S. Route   State Route

Heavy-duty ____

4867 I SW (GAGEVILLE)

OHIO

QUADRANGLE LOCATION

ASHTABULA NORTH, OHIO

NE/4 ASHTABULA 15′ QUADRANGLE
N4152.5—W8045/7.5

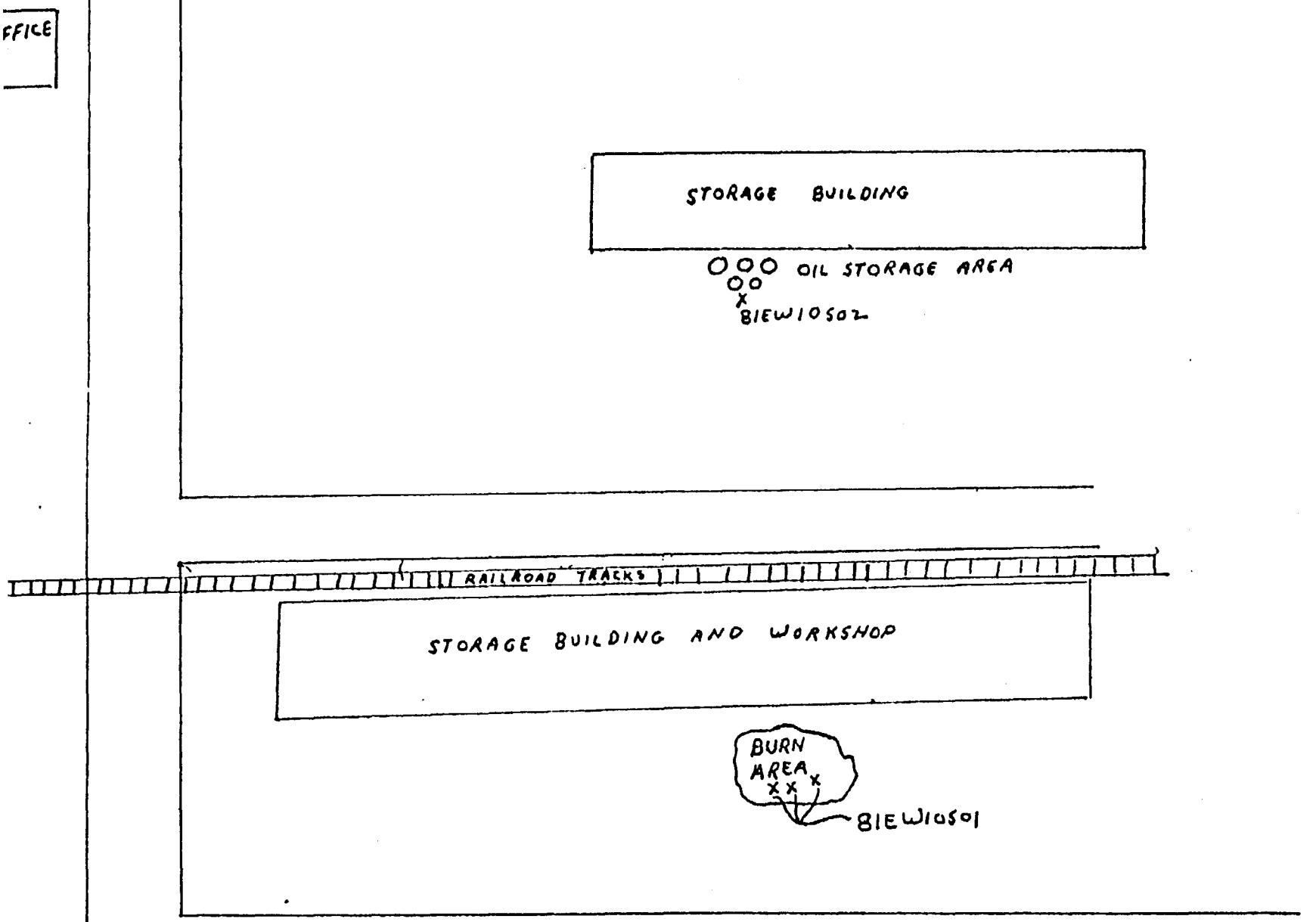
1960
PHOTOREVISED 1970

20242
ON REQUEST

Revisions shown in purple compiled in cooperation with State of Ohio agencies from aerial photographs taken 1970. This information not field checked.

ACME SCRAP IRON AND METAL
PCB SURVEY
SAMPLING MAP
MAY 21, 1981

FFICE



Acme Scrap Metal
2110 State Road
Ashtabula, Ohio 44004

OHD 017-511-031

Acme Scrap Metal is located near the City of Ashtabula, Ashtabula, County, Ohio. Acme is located in an industrial area that is one of the largest and most diversified concentrations of chemical plants in Ohio. Acme is bordered by RMI to the west, Gulf & Western to the north and east, and Conrail Railroad to the south. Acme Scrap Metal receives PCB transformers for disposal. The facility cuts and burns transformers in order to recover copper, aluminum, and steel for resale as scrap metal.

Soil on Acme property is saturated with oil and runoff is discharged to Fields Brook via city storm sewers. The sewer outfall has had frequent oil discharges. In 1981, an absorbent boom was placed in Fields Brook by the OEPA to contain the discharged oil. The OEPA asked Acme to maintain this boom. In the past, they have not maintained it properly and oil has entered into Fields Brook from this area. [redacted] An oil retention lagoon was installed in 1982 to capture oils from site drainage. The facility has been the subject of a U.S. EPA PCB Compliance Report (1982). Numerous accidental fires have occurred when personnel using cutting torches ignited PCB laden oil in transformers. Open fires have occurred from burning transformers, which resulted in the issuance of open burning violations.

Based on targets (population potentially affected) and the nature of PCB's it is recommended the site be given a low priority for FIT activities. Additional investigation should focus on soil testing to determine nature and extent of contamination. Sediment at culvert and outfall should be sampled and remedial activities considered. Burning of PCB's at insufficient temperatures increases the potential for dioxin formation. This should be addressed during soil sampling. Investigations should be incorporated into the ongoing Fields Brook NPL project. A medium priority is recommended for ongoing State activities as it relates to the Fields Brook site.

OhioEPA

September 13, 1985

Sam Simon
(Re Acme Scrap Metal)
2110 State Road
Ashtabula, Ohio 44004

Dear Concerned Party:

Ohio EPA has completed the enclosed preliminary assessment as part of our ongoing process to identify and remedy hazardous materials problems in Ohio. We are providing you with a copy of this information because of your identified owner and/or operator status.

Ohio EPA will ultimately screen (or "preliminarily assess") over 800 sites included on U.S. EPA's Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) list of 22,000+ sites nationwide. This screening is based upon readily available information, and is used to prioritize sites for additional investigation as outlined in the National Contingency Plan. (See 40 CFR Part 300) The Unregulated Sites staff conduct additional activities based upon the priority assigned in the preliminary assessment (none, low, medium, high). A site inspection with sampling sufficient to characterize the site may follow the preliminary assessment. Actions subsequent to the site inspection - if warranted - include Superfund listing and remedial actions.

The preliminary assessments are put in our files when they are completed and sent to U.S. EPA. We are giving you this information to better enable you to address any possible inquiries from the public. We welcome any additional information or comments and ask that you contact the Unregulated Sites staff at the following offices:

Central	Columbus	614/462-6733 or 462-8934
Northeast	Twinsburg	216/425-9171
Southwest	Dayton	513/449-6357
Northwest	Bowling Green	419/352-8461
Southeast	Logan	614/385-8501

You might also wish to contact our Public Interest Center at 1-614-466-8508.

Sincerely,

Steven H. White, Chief
Division of Solid & Hazardous Waste Management

cc: NEDO

RECEIVED
SEP 17 1985
OHIO EPA-N.E.D.O.

State of Ohio Environmental Protection Agency
361 E. Broad St., Columbus, Ohio 43216-1049, (614) 466-8565

Ohio Department of Health

Industrial Chemistry Section

Environmental Sample Submission Repo

Agency: [redacted]

Division Program: [redacted]

Analysis Reported To: ☐ CO ☐ CDO ☐ SE ☐ NE ☐ SW ☐ NW

Laboratory: ☐ Central ☐ SE ☐ NE ☐ SW ☐ NW

Sample Number: [redacted]

Analyst: J. Evans Supervisor: [redacted]

Date Received: [redacted]

Date Reported: [redacted]

Sample Identification

Station: [redacted]

ID Number: SC [redacted]

Address: [redacted]

City: [redacted] Zip: [redacted]

County: Fairfield Phone: [redacted]

Collected By: Tuckerman

Grab Sample Date or Beginning Date of Composite Sample—Use Milita

Month	Day	Hour	Minute
[redacted]			

Ending Date of Composite Sample—Use Military Time

Year	Month	Day	Hour	Minute	CVT	S/T

Field Treatment:

☐ Filtered ☐ $CuSO_4 - H_3PO_4$

☒ Iced ☐ H_2SO_4

☐ NaOH ☐ HNO_3

☐ Other (Explain)

Additional Information—Analyst Remarks—Non Routine Analytical Requests

PCB's in oil only

Possibility of another type of PCB as well as the 1254. There appears to be a blend of the 1254.

Radioisotopes

☐ Alpha, Total pCi/l	P1501.
☐ Alpha, Diss pCi/l	P1503.
☐ Alpha, Suspd pCi/l	P1505.
☐ [illegible]ta, Total pCi/l	P3501.
☐ Beta, Diss pCi/l	P3503.
☐ Beta, Suspd pCi/l	P3505.
☐ Barium 140, Total pCi/l	P75030.
☐ Cesium-134, Total pCi/l	P28414.
☐ Cesium-137, Total pCi/l	P28401.
☐ Iodine-131, Total pCi/l	P28301.
☐ Potassium-40, Total pCi/l	P75038.
☐ Radium-226, Total pCi/l	P9501.
☐ Radium-228, Total pCi/l	P11501.
☐ Strontium-90, Total pCi/l	P13501.
☐ Strontium-89, Total pCi/l	P15501.
☐ Tritium pCi/l	P7000

Volatile Organics

☐ Chloroform, Total ug/l	P32106.
☐ Methylene Chloride, Total ug/l	P34423.
☐ Carbon Tetrachloride, Total ug/l	P32102.
☐ Bromoform, Total ug/l	P32104.
☐ Bromodichloromethane, Total ug/l	P32101.
☐ Dibromochloromethane, Total ug/l	P32105.
☐ 1, 2-Dichloroethane, Total ug/l	P32103.
☐	
☐	
☐	
☐	
☐	

Pesticides

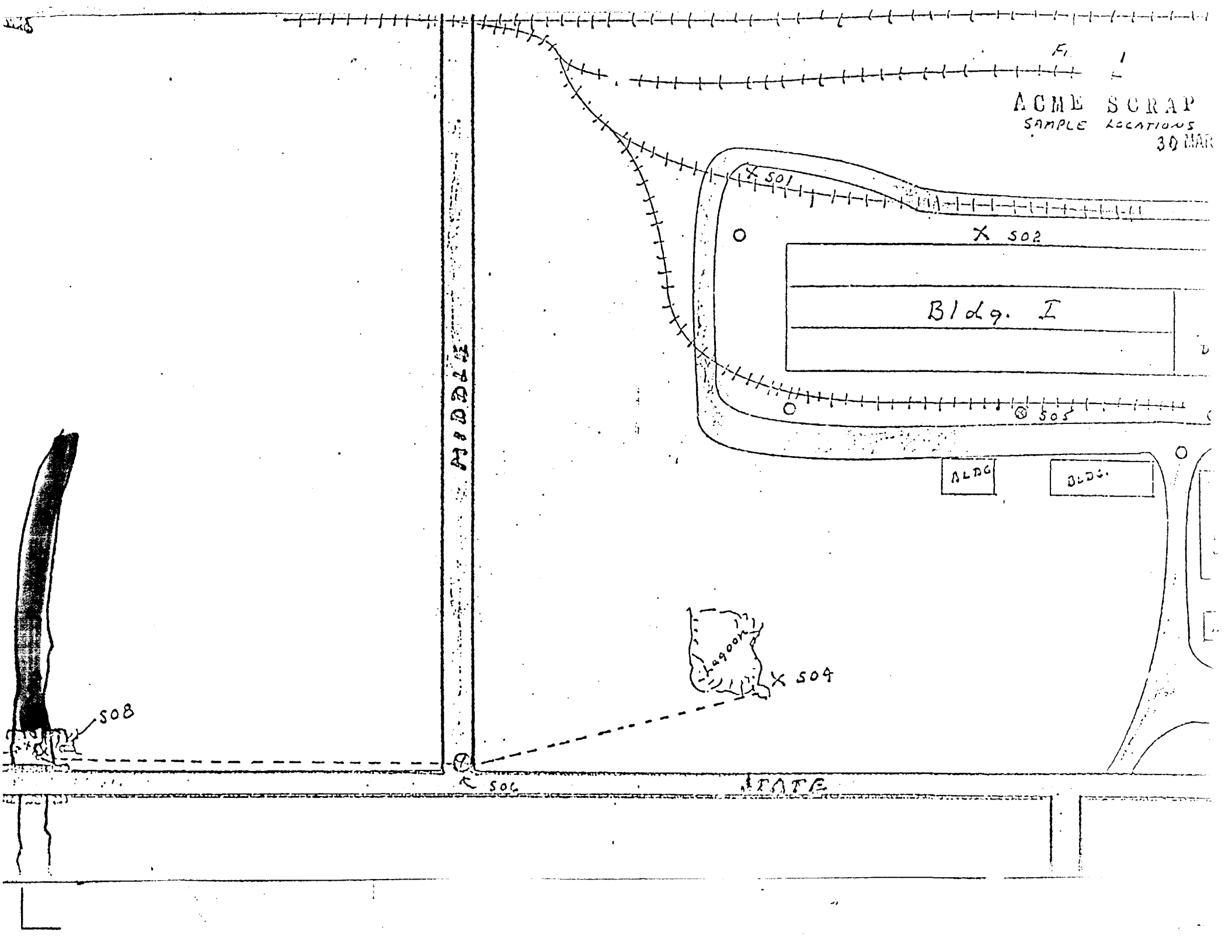
☐ Aldrin, Wht Sampl ug/l	P39330.
☐ DDD, Wht Sampl ug/l	P39360.
☐ DDE, Wht Sampl ug/l	P39365.
☐ DDT, Wht Sample ug/l	P39370.
☐ Dieldrin, Wht Sampl ug/l	P39380.
☐ Chlordane, Wht Sampl ug/l	P39350.
☐ Endrin, Wht Sampl ug/l	P39390.
☐ Heptachlor, Wht Sampl ug/l	P39410.
☐ Heptachlor-Epoxide, Wht Sampl ug/l	P39420.
☐ Lindane, Wht Sampl ug/l	P39782.
☐ Methoxychlor, Wht Sampl ug/l	P39480.
☐ Malathion, Wht Sampl ug/l	P39530.
☐ Parathion, Wht Sampl ug/l	P39540.
☐ Methyl Parathn, Wht Sampl ug/l	P39800.
☐ Toxaphene, Wht Sampl ug/l	P39400.
☐ 2, 4-D, Wht Sampl ug/l	P39730.
☐ Silvex, Wht Sampl ug/l	P39760.
☐ BHC, Wht Sampl ug/l	P39340.
☐ Mirex, Wht Sampl ug/l	P39755.
☐ Diazinon, Wht Sampl ug/l	P39570.

Special Parameters

[redacted]	
☐ Chlorophyll "A" ug/l	P32209.
☐ Phenols ug/l	P32730.
☐ Sample Purpose	P71999.
☐ Sample Code	P115.
☐	
☐	
☐	

Distribution: 1—Data Processing 2—Central Office 3—District Office 4—Owner 5—Laboratory

(4589-32) Ohio Depa[illegible]


ACME SCRAP
SAMPLE LOCATIONS
30 MAR
S01
S02
Bldg. I
S05
BLDG.
BLDG.
MIDDLE
Lagoon
S04
S08
S06
FATE

VII. Findings and Conclusions

[redacted] The facility has no NPDES permit. Samples S01 (oil collected from the property) and S07 (oil at Fields Brook) were compared in the laboratory and found to be similar. PCBs were also detected in all the sampled facility storm sewers. Dye was placed in the facility's storm sewers at 12:06 p.m., reached the manhole at State and Middle Roads at 12:21 p.m., and reached Fields Brook at 12:37 p.m. Because of the difference in quality between the water flowing through the facility's sewer trunk line and that entering Fields Brook, an undiscovered back lot storm sewer is suspected to exist.

There was evidence (in the form of insulators and a drained capacitor bank) that the company is taking transformers and capacitors. Oil, water, and soil samples collected on the property showed significant PCB contamination. The company is collecting PCB laden oil from behind the State's boom in Fields Brook. Company personnel would give no information on the handling, storing or disposal of this oil. Water samples collected in Fields Brook, outside the boom, showed significant concentrations of PCBs entering the brook (5 ppb).

VI. Samples

The following samples were collected (Figure 1):

S01 was an oil plus water sample taken from a trench in the northeast section of the property at the juncture of a roadway and railroad track. The surface of which was covered with a heavy layer of oil.

S02 was taken from an area west of Building I (see attachment) where a large quantity of insulators, similar to those used on transformers and capacitors, were strewn about. In fact several capacitors were photopraphed in this same area.

S03 was voided.

S04 was taken from an opening in the main discharge line from the property located at the proposed treatment lagoon. There was an oil film on the water.

S05 was taken from a central catch basin located on the west side of Building I and midway relative to the length of Building I. Water with an oil sheen was flowing through this basin.

S06 was taken from a manhole at the juncture of State and Middle Roads. The sample source was verified by introducing Rhodamine B dye into the sewer at the S04 sample point and detecting same at the manhole. This was done after samples were drawn. The dye was introduced at 12:06 p.m. and reached the manhole at 12:21 p.m.

S07 was taken from the mouth of the discharge line and inside the oil boom at Fields Brook. The oil behind the boom was of the same color and consistency as that collected at S01. Following the sampling the same dye introduced at S04 appeared at 12:37 p.m., thus establishing that the Acme discharge travels directly to Fields Brook.

S08 was a sample drawn from a ground runoff line that also discharges into Fields Brook inside the oil boom area of confinement.

S09 was a sample drawn from Fields Brook immediately outside of the oil boom and clearly discernable as a plume from under the boom.

The following PCB concentrations were detected:

Sample Number	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCB	Sample Type
S01	19 ppm	< 5 ppm	7 ppm	< 5 ppm	[redacted]	
S02	< 5 ppm	< 5 ppm	20 ppm	12 ppm	[redacted]	
S04	< 5 ppb	< 5 ppb	0.7 ppb	< 0.5 ppb	[redacted]	
S05	< 0.5 ppb	< 0.5 ppb	0.8 ppb	< 0.5 ppb	[redacted]	
S07	< 0.5 ppm	< 0.5 ppm	240 ppm	< 0.5 ppm	[redacted]	and
S07	< 0.5 ppb	< 0.5 ppb	6.5 ppm	< 0.5 ppb	[redacted]	
S08	< 0.5 ppb	< 0.5 ppb	0.8 ppb	< 0.5 ppb	0.8 ppb	Water
S09	< 0.5 ppb	4.6 ppb	< 0.5 ppb	0.4 ppb	5.0 ppb	Water

Sample S06 was broken in shipment from CRL to a contract laboratory. Sample S01 and S07 were compared by IR and FID/TSD at the laboratory. IR indicated no detectable differences between samples and GC showed significant similarities between the samples.

Acme Scrap

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: June 9, 1982

SUBJECT: PCB Compliance Inspection at Acme Scrap Iron and Metal at 2101 State Road in Ashtabula, Ohio

FROM: Daniel C. Watson, Physical Scientist
THRU: A.R. Winklhofer, Director, EDO

TO: Karl E. Bremer, 5HT
ATTN: Sheldon Simon, 5HT

Attached is copy of the PCB inspection report for Acme Scrap Iron and Metal, Ashtabula, Ohio conducted on March 30, 1982. This inspection was conducted at the request of your office and the Ohio EPA. During the inspection the inspectors discovered the following:

[redacted]

2. A large discharge of PCB laden oil draining from this property to Fields Brook via the city storm sewers. The facility has no NPDES permit.

3. A pool of oil on the property similar to the PCB laden oil found at Fields Brook.

On May 5, 1982, the writer and Charles Beier of EDO, took photographs of a large mound of transformer casings at this facility. These photographs were taken from Middle Road and copies will be sent to your office at a later date.

David Barna, U.S. EPA - EDO, visited the facility on June 2 to look at the facility's newly constructed oil separator. Mr. Barna found that the separator was improperly constructed and not working efficiently.

Attachments

cc: Ed Di Domenico, 5WQC

EPA FORM 1320-6 (REV 3-76)

1. Submit to this office detailed plans for the construction of an oil pollution treatment system which will eliminate oil discharges to Field's Brook from the 36" drainage tile on your property. All surface water drainage from your facility should discharge through this treatment system.

   This oil pollution treatment system should have adequate capability to separate and retain oil during high flow conditions and, under conditions when the water and oil will have a high concentration of suspended solids.

   These plans should include a timetable for implementation and should be submitted for approval to the Ohio Environmental Protection Agency, Office of Emergency Respose; 2110 East Aurora Road; Twinsburg, Ohio 44087. These plans should be received by this office within 30 (thirty) days of your company's receipt of this letter.

2. Daily maintenance and removal of oil should take place at the oil containment boom in Field's Brook. The use of a fiberous oil absorbent material should be used to help facilitate this daily removal of oil. The removed oil and oil contaminated absorbent material should be stored and disposed of in accordance with Federal EPA laws and regulations.

   This daily maintenance and removal of oil at the oil containment boom in Field's Brook should be initiated immediately upon receipt of this letter, and should continue until such time as the operation of the oil pollution treatment system has elimianted the oil discharge to Field's Brook; at that time notification should be given to this office.

Your company's failure to act in accordance with the request stated in this letter will result in the referral of your company to the Director of the Ohio Environmental Protection Agency for the appropriate enforcement action.

Your co-operation will be greatly appreciated in this matter. If you have any questions in this matter, please contact this writer at 216/425-9171.

Sincerely,

James F. Irwin

James F. Irwin
District Chief
Office of Emergency Response
Northeast District Office

Enclosure(s)

cc: S. Simon, USEPA
K. Schultz, ERS/CO
D. Lee, IWW/NEDO
M. Stanga, OEPA/Legal Advisor

OhioEPA

Re: Ashtabula County
Ashtabula
Oil Discharges to Field's Brook
OEPA I.D. # 12-4-2445

CERTIFIED MAIL

Acme Scrape Iron and Metal, Inc.
2101 State Road
P. O. Box 218
Ashtabula, Ohio 44004

June 24, 1981

Attention: Joe Kemp

Dear Mr. Kemp:

Since December 1, 1980, the Ohio Environmental Protection Agency, Office of Emergency Response, has been conducting an investigation into the occurrence of oil discharges into Field's Brook from your facility located at 2101 State Road, Ashtabula, Ohio.

As you are aware, several meetings and inspections have been conducted at your facility by personnel from this office in reference to these oil discharges. As indicated to you during these meetings our investigation reveals that oil contaminated with PCB's (Polychlorinated Biphenols) is entering the 36" storm sewer drainage tile at your facility and is discharging into Field's Brook. It was also pointed out to you that these discharges entering Field's Brook from your facility are in violation of Section 6111.07 of the Ohio Revised Code. A copy of these laws are enclosed for your reference.

Since December 1, 1980, the efforts initiated by your company to prevent and control these discharges entering Field's Brook have included the altering of drainage in some of the oil spillage areas' of your facility and the placement of an oil containment boom in Field's Brook. These efforts have been appreciated by this office and have served as temporary remedial action.

However, our investigation also reveals that the effectiveness of these efforts are not adequately preventing oil and PCB contamination to Field's Brook from your facility and consequently result in your company being in continued violation of Ohio Water Pollution Control laws. Due to these continuing discharges to Field's Brook and the violations they are causing, it is necessary that your company promptly implement permanent and more effective corrective measures as recommended by this office.

In order to correct these violations and avoid legal action by the Ohio Environmental Protection Agency, your company should initiate the following corrective measures:

CEI and RES Indeces		USEPA, Westlake
CEI-101 (DET-125)	Att. 25, "Toxics Summary Report, Barna and Easterling; Fly ash disposal on No. Field's Brook, Detrex drainage ditch to Field's Brook.	1982
CEI-102	Photo of "cinder landfill on north bank of Field's Brook," Paul Hess' survey. (Source: Roll #2, TWIMIC, 021472)	1981
RES-101	Att. 17, "Toxics Summary Report, Barna and Easterling; Surface runoff from solid landfill, composed of PRP's sludge (Incl: MVC and Cr, explicitly) to Whitman's Creek.	1982

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

June 9, 1980

Reconnaissance Inspection, Miscellaneous Sites, Ashtabula, Ohio

David R. Barna, Environmental Engineer, EDO
THRU: A. R. Winklhofer, Director, EDO

Compliance Section, 5EWPE
ATTN: William Miner

On May 7, 1980, the writer and Daniel C. Watson, Physical Scientist, EDO, conducted a reconnaissance inspection of several old landfill sites in the Ashtabula area. The location of the sites are shown in Attachment 1. The inspections were conducted pursuant to requests made by Sandra Gardebring on January 24, 1980, February 26, 1980, and March 5, 1980 for inspection activities in the Ashtabula area.

Area No. 1

This area appears to have been used for fly ash disposal, reportedly by CEI. Low portions of the land have been filled in. The area south of Fields Brook is covered with grasses and other vegetation, possibly seeded after the fill was covered. North of Field's Brook are evidences of fly ash disposal. However, there was no site activity observed (i.e., no trucks, grading, etc.). The last layer was one of fly ash. There was some minor erosion of the southern bank of the fill area. Also there were two sites of rubbish and old barrel piles. These sites do not appear to be recent dumpings. Photographs of the site are presented in Attachment 2.

Area No. 2

Area No. 2 appears to be a former industrial fill site that has since been developed. Several industries and commercial buildings have been developed on this built-up area. The portion of fill on RMI-Metals Reduction land looks recently graded. Scattered drums are located on this graded area. The drums appear to be empty.

The bank of the fill adjacent to the truck sales parking lot shows signs of erosion. Debris is scattered throughout the bank and in the tributary to Field's Brook which drains the area. North of East 21st Street a truck company is located on built-up land. The Field's Brook tributary is littered with tires, empty tanks, and other debris, perhaps from the trucking firm. Photographs taken of Area No. 2 are presented in Attachment 3.

Areas Nos. 3 and 4

Areas Nos. 3 and 4 are located between State Road and Route 11, adjacent to both banks of Fields Brook. No trespassing signs were posted on State Road. However, Field's Brook was walked to approximately the confluence of a tributary from the north. No evidence of any fill or dumping activities were observed in the areas visited. Natural vegetation prevailed. Photographs taken of this area appear in Attachment 4. Additional photographs were taken on May 8, 1980 from the culvert under Route 11. These photographs have not yet been developed.

CONCURRENCES

SYMBOL								
SURNAME	DB	[illegible]						
DATE	6-10-80	[illegible]						

EPA Form 1320-1 (12-70)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Areas No. 5

Areas No. 5 is the area south of Detrex Chemical Industries, Inc., and north of Field's Brook. This area was visited in conjunction with a plant inspection of Detrex on May 8, 1980. Charles Beier, Engineering Technician, EDO, walked a ditch draining Detrex property south to the confluence with Field's Brook. Only natural vegetation was observed with no evidences of fill or dumping activities.

Ohio EPA was notified but did not participate in the site inspections. No samples or field measurements were taken. Photograph negatives will remain on file at the Eastern District Office.

If you have any questions concerning this inspection, contact David R. Barna at FTS 293-7260.

Attachments

cc; L. Townsend, 5SCRL
H. Zar, 5E
V. Saulys, 5GLNP

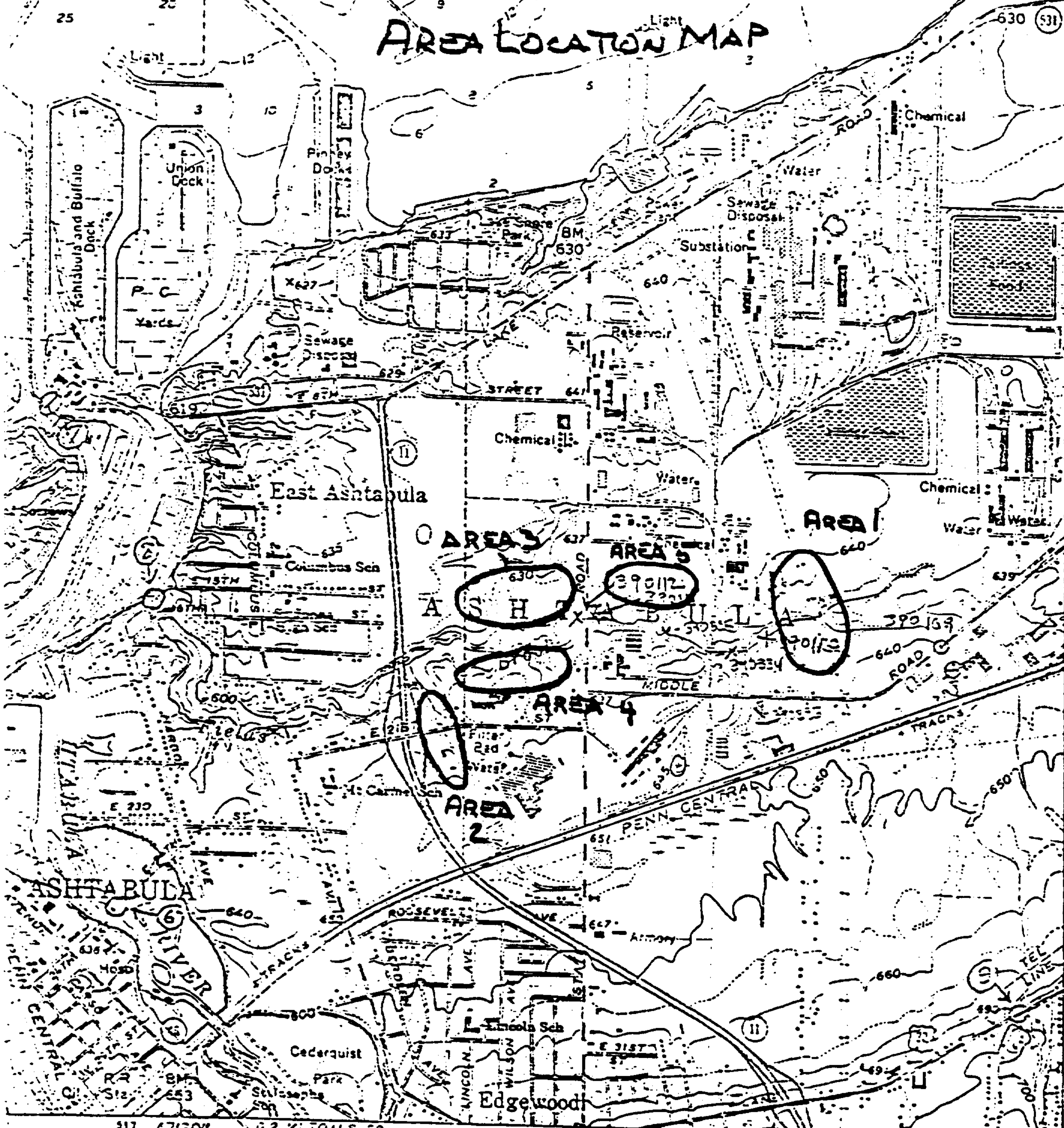
DB:dn 5/30/80

	CONCURRENCES							
SYMBOL								
SURNAME								
DATE								

List of Attachments

Attachment No.	Description
1	Area Location Map, USGS Quad Sheet
2	Photo Attachment, Area No. 1
3	Photo Attachment, Area No. 2
4	Photo Attachment, Area Nos. 3 & 4

ATTACHMENT 1
AREA LOCATION MAP



1 MILE
7000 FEET
KILOMETER

ROAD CLASSIFICATION

Medium-duty Light-duty

Unimproved dirt

U. S. Route State Route

Heavy-duty

OHIO

QUADRANGLE LOCATION

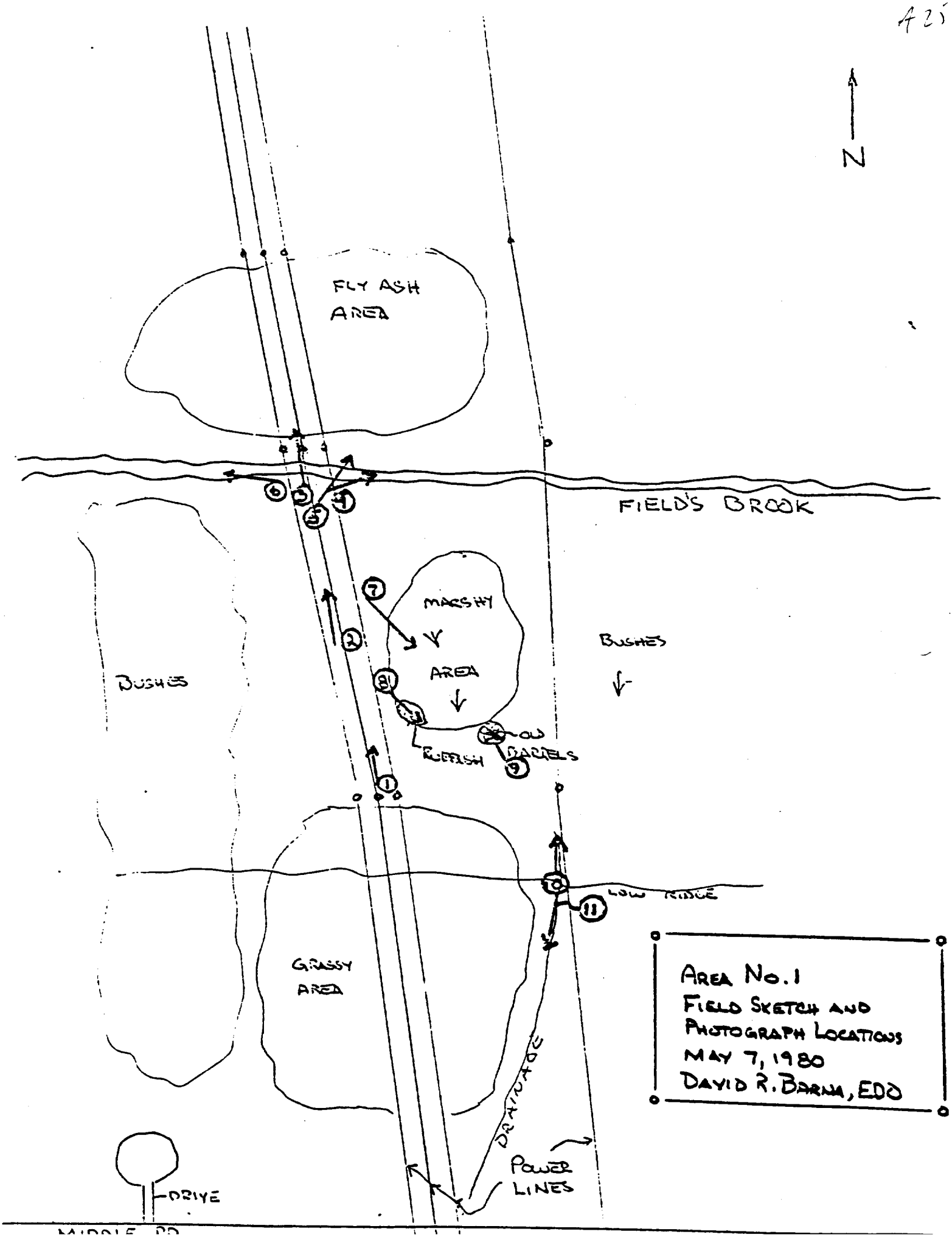
4867 I SW (GAGEVILLE)

70242
ON REQUEST

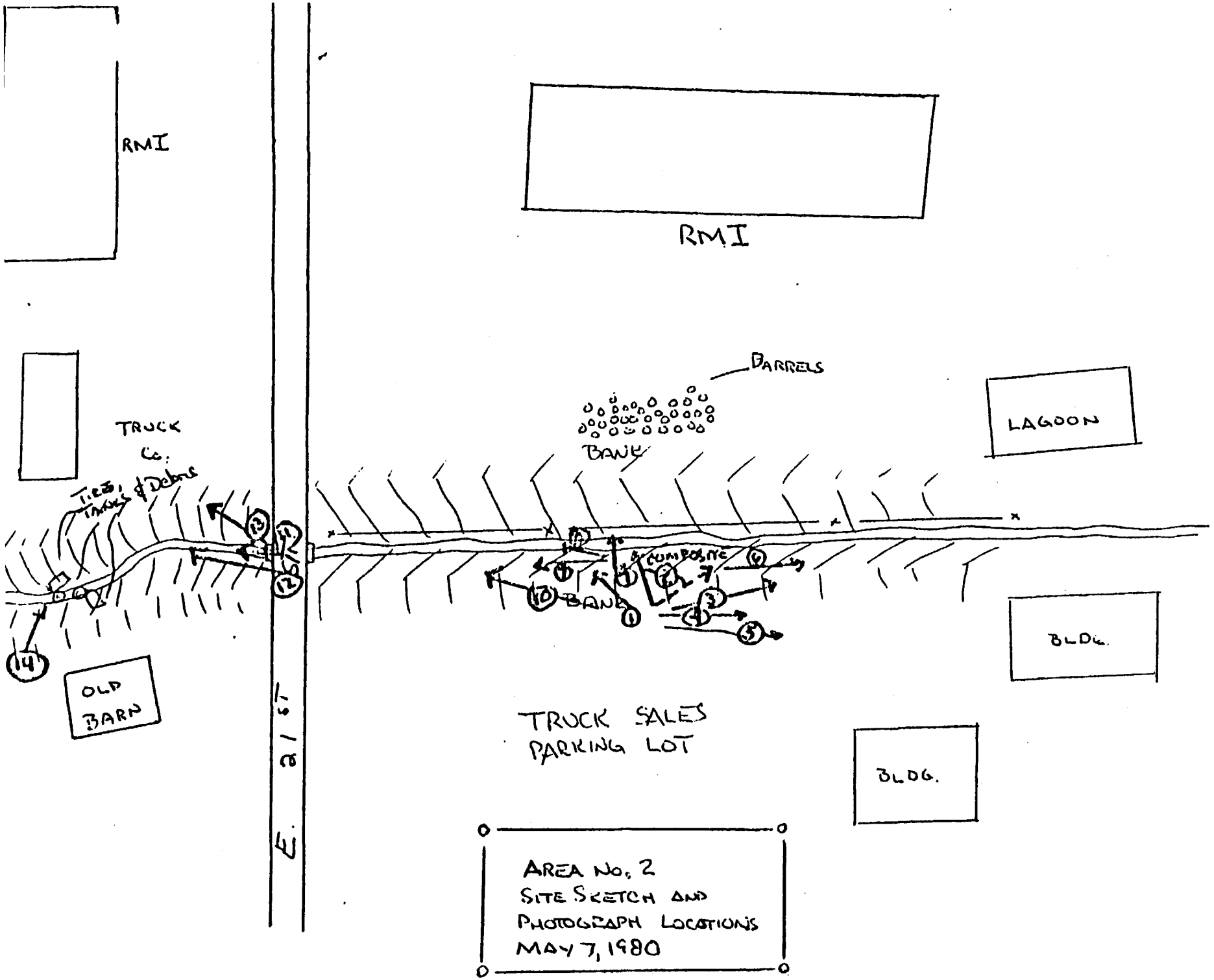
Revisions shown in purple compiled in cooperation with State of Ohio agencies from aerial photographs taken 1970. This information not field checked

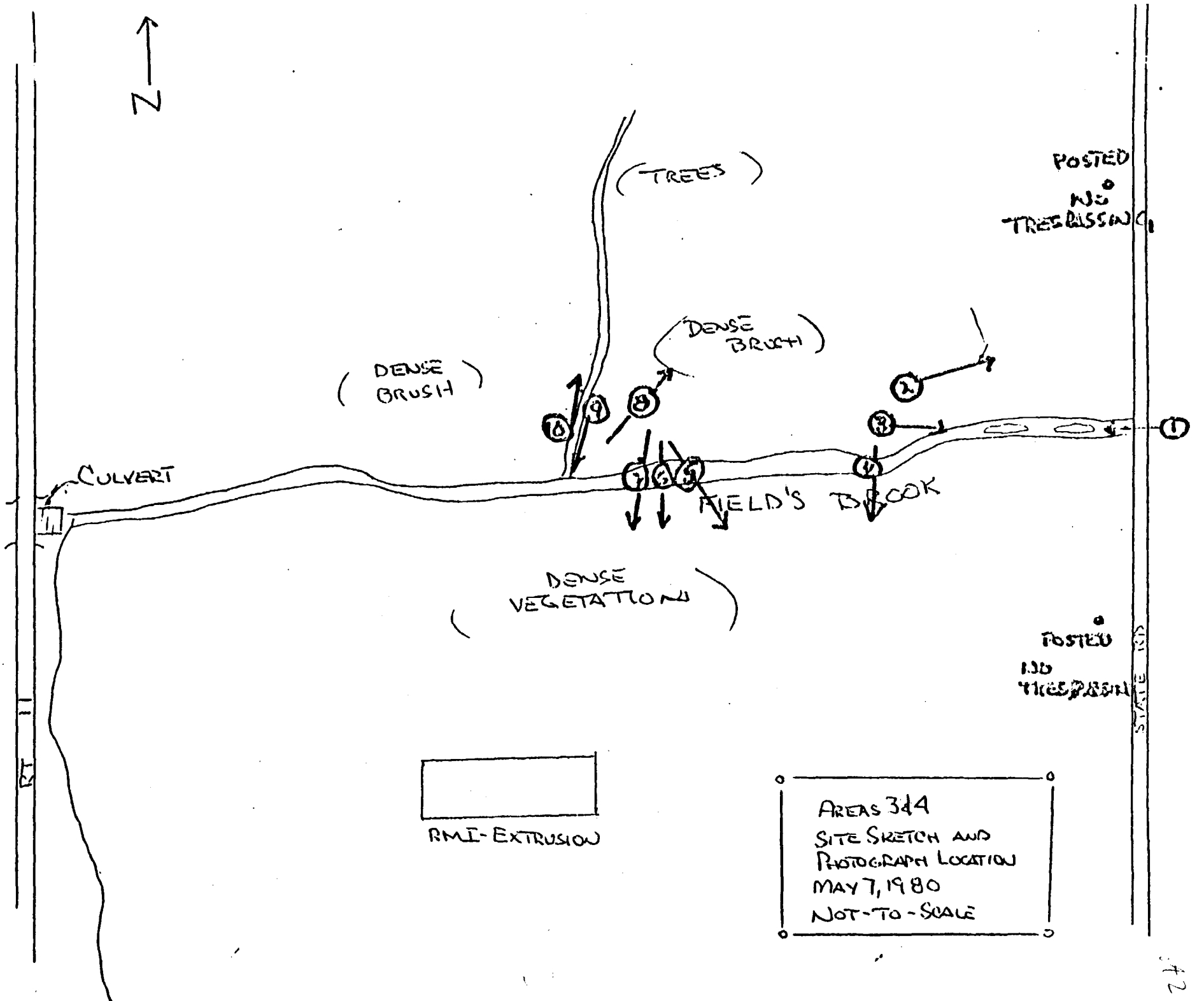
ASHTABULA NORTH, OHIO
NE/4 ASHTABULA 15' QUADRANGLE
N4152.5—W8045/7.5

1960
PHOTOREVISED 1970
AMS 4867 IV NE—SERIES V852



AREA No. 1
FIELD SKETCH AND
PHOTOGRAPH LOCATIONS
MAY 7, 1980
DAVID R. BARNA, EDD


RMI
RMI
BARRELS
BANK
LAGOON
TRUCK
Co.
Tires, Tanks & Debris
COMPOSITE
BANK
BLDG.
OLD
BARN
TRUCK SALES
PARKING LOT
BLDG.
E. 21 ST
AREA No. 2
SITE SKETCH AND
PHOTOGRAPH LOCATIONS
MAY 7, 1980


N
(TREES)
POSTED
NO
TRESPASSING
(DENSE BRUSH)
(DENSE BRUSH)
CULVERT
FIELD'S BROOK
(DENSE VEGETATION)
POSTED
NO
TRESPASSING
STATE RD
RMI-EXTRUSION
AREAS 3&4
SITE SKETCH AND
PHOTOGRAPH LOCATION
MAY 7, 1980
NOT-TO-SCALE

FIELD PHOTOGRAPHY LOG SHEET

Page 1

DATE 11-1-81

TIME 9:05 (A.M.) P.M.

DIRECTION: N NNE NE ENE
E ESE SE SSE
(S) SSW SW WSW
W WNW NW NNW

WEATHER SUNNY AND CLEAR - 62°F

SITE FIELD'S BROOK

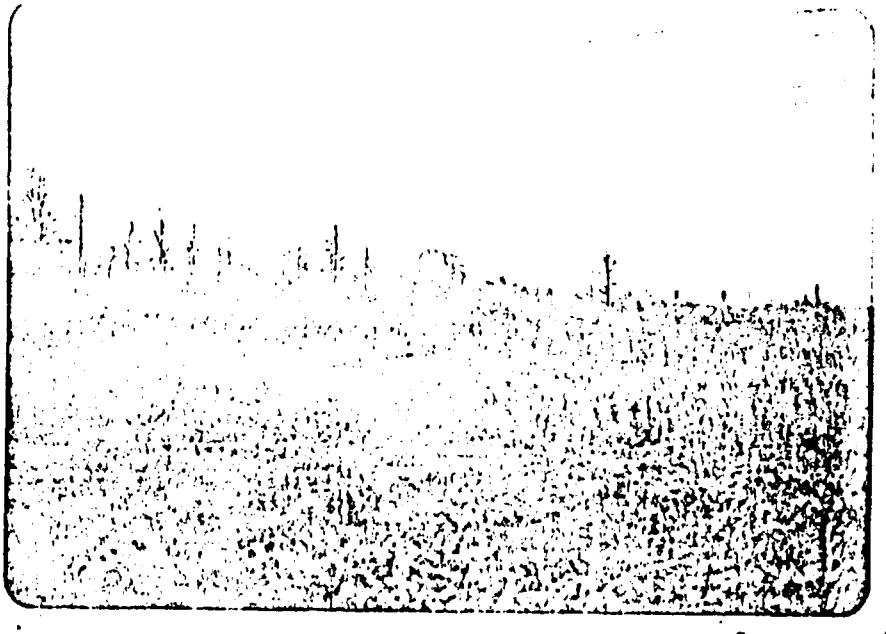
IDD# FS-8110-7

PHOTOGRAPHED BY:

PAUL HESS

SAMPLE IDD (if applicable)

N/A



DESCRIPTION: VIEW OF BROOK FROM [redacted] NORTH BROOK AT HEAD-WATER FORK.

DATE 11-1-81

TIME 9:10 (A.M.) P.M.

DIRECTION: (N) NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER SUNNY AND CLEAR - 62°F

SITE FIELD'S BROOK

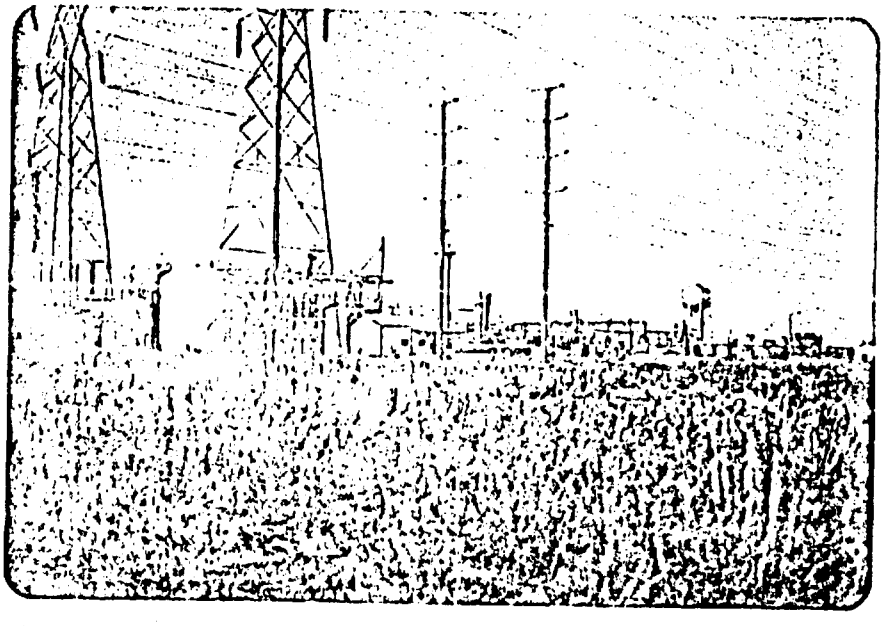
IDD# FS-8110-7

PHOTOGRAPHED BY:

PAUL HESS

SAMPLE IDD (if applicable)

N/A



DESCRIPTION: SAME AS ABOVE, BUT NORTHERN VIEW OF OLIN PLANT.

ecology and environment, inc.
223 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60606, TEL. 312-663-9415
International Specialists in the Environmental Sciences

DATE: November 24, 1981

TO: File

FROM: Paul Hess

SUBJECT: Ohio / TDD# F5-8110-7
Ashtabula / Fields' Brook
Field Inspection Report

During the period of November 3rd through the 12th of this year, writer assisted by a work party of five, conducted an on-site investigation of the Fields' Brook drainage basin located in Ashtabula County, Ohio. The work party consisted of four FIT members, one state employee, and one industrial representative. Steve Tuckerman of the Ohio EPA's, Northern District Office, and Joe Holman, Environmental Engineer for RMI Company, Niles, Ohio, were the non-FIT members. only two days.

The Fields' Brook drainage basin has an overall length of five and one half miles. The two and one half mile long main body of water generally flows in a westerly direction before emptying into the harbor area of the Ashtabula River. The basin has five tributary streams associated with the main body of water which adds another three miles to its length. The two eastern branches in the area of the headwaters form a half mile fork to the main water body. The two southern and one northern tributaries of this basin are each less than one mile long, but as a whole are two miles in length (see attached site map).

It was the function of this investigation to secure a streambed profile along the main body of water as well as along the northern tributary so that future sediment core sampling and preclean-up activities can be planned by the U.S. EPA. In order to accomplish this end, a preliminary air monitoring inspection for respiratory safety was conducted above the main water body at the access points of three out of seven bridges that span this basin. It was concluded from the air testing program that a respiratory hazard did not exist for the work party (see attached memo to file dated November 19, 1981 by Mr. Bartholomew).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MAR 25 1980

Recon Survey Inspection Report - Reserve [redacted]

Willie H. Harris, Civil Engineer, EDO

THRU: A. R. Winklhofer, Director, EDO

Compliance Section, 5/EWPE

ATTN: William Hiner

On March 12, 1980, the writer and Dave Barna, Environmental Engineer, EDO, conducted a recon survey at the subject facility. The inspection was conducted as a follow-up to recent compliance evaluation/sampling inspections of Glidden-Durkee Division, Diamond Shamrock Corp., RMI Metals Reduction plant, Olin Corp., General Tire, and Gulf & Western Natural Resources Co. These industries, all of which are located in the Ashtabula, OH area, were found to utilize Reserve Environmental Services (RES) for ultimate disposal of their solid and liquid waste materials. Compliance inspection reports for each of the above mentioned industries are being prepared and will be submitted to Enforcement Division separately. The RES recon inspection report (EPA Form 2070-3) is attached.

RES is owned by the Koski Construction Company, Ashtabula, OH. RES disposes of both liquid and solid wastes. Liquid wastes include primarily spent caustic and waste acid. Solid wastes consist of a variety of sludges which contain titanium dioxide and an assortment of other metallic oxides. A complete listing of specific waste types, and their origin, is included on Page 2a of 10 of the site inspection report.

All wastes are picked up and trucked to the disposal site by RES. The disposal sites are located on two 40 acre parcels of land which are separated by LaBounty Road and bounded on the south by Middle Road (see site location map). The site west of LaBounty (new site) is used for liquid disposal. The site east of LaBounty (old site) is currently used for solid/sludge disposal, but was used for disposal of all waste types prior to construction of the new site in late 1977. Liquid wastes are initially stored in a 20 million gallon equalization pond. The waste is pumped from the equalization pond to a neutralization facility for treatment. The treatment plant consists of a 50 ton lime silo, screw feeder, plant control instrumentation, a 15,000 gallon neutralization tank with mixers, and two feed pumps. Following neutralization, the waste is discharged to a 20 million gallon settling basin. Until about a year ago, neutralization was effected by use of a hydrated lime. Due to rising costs for this material, RES has now converted to a less expensive precipitated lime. Supernatant from the settling basin flows by gravity into an adjacent 20 million gallon holding pond. There is presently no discharge from this pond. However, RES plans to discharge the supernatant to Lake Erie (which is approximately 1/2 miles north of the site) if a NPDES permit can be obtained from the OEPA. A meeting between OEPA and RES regarding ultimate disposition of treated liquid wastes and future site expansion is tentatively scheduled for March 18, 1980.

CONCURRENCES						
SYMBOL			EDO			
SURNAME			WHH			
DATE			3-20-80	3/24/80		

EPA FORM 1320-1

OFFICIAL FILE COPY

Trucked solid material and sludges are either landfilled or lagooned at the solid/sludge disposal area (old site). As previously indicated, the old site was originally used for disposal of all waste types. Waste acid previously stored at the old site was discharged to Whitman Creek under NPDES discharge permit #OH 0052086. The acid waste water is now being pumped to the waste acid equalization pond at the new site. Although there reportedly has been no discharge from the old site in more than a year, the NPDES permit, which was issued May 19, 1975, is still effective and does not expire until May 18, 1980.

No immediate major problems were noted during the inspection. However, visual observations revealed the following:

a. There was evidence of spillage in the raw acid (liquid waste) unloading area at the new site. This area does not have appropriate containment and/or diversionary structures to prevent spillage from entering a small adjacent drainage ditch which is tributary to Whitman Creek. Adequate curbing around the outside perimeter of the unloading area would probably eliminate nearly all spillage to the above mentioned ditch.

b. [redacted] disposal area (old site) just north of the main solid/sludge disposal lagoons. Diking in this area is not sufficient to contain runoff, consequently, [redacted] Whitman Creek which flows directly through the center of this area (see site map). RES should install diversionary/containment structures to capture contaminated runoff or consideration should be given to abandoning this area of the old site in favor of the main solid/sludge lagoons.

c. Ground water monitoring wells have been installed around the outside perimeter of the new liquid waste disposal site. There are, however, no monitoring wells around the old site. The need for monitoring wells in the vicinity of the old site should be thoroughly investigated by the OEPA.

d. No seepage or leaks were observed from any of the surface impoundments (lagoons/ponds) during the inspection. Information obtained from OEPA indicates that a major spill of 12 to 15% hydrochloric acid occurred at RES on 2/13/78. The cause of the spill was reportedly a ruptured dike. Approximately 2 to 3 million gallons of acid were lost, much of which entered Whitman Creek.

As indicated above, RES plans to discharge treated liquid wastes to Lake Erie, if granted a NPDES discharge permit. EDO suggests holding in abeyance the issuance of a discharge permit until RES has demonstrated through a sampling program that the discharge will have no adverse effect on the environment. In addition to sampling for conventional pollutants such as pH, COD, metals, etc., the sampling program should include potentially toxic organic pollutants and biomonitoring as a means of measuring the specific toxicity of the discharge. Should a NPDES permit be denied, the OEPA should thoroughly investigate ultimate disposition of all treated liquid wastes currently stored on site prior to allowing any future expansion of the existing facilities.

If you should have questions regarding this report, please call Willie Harris at FTS 226-7269.

Attachments

cc: H. Zar, 5/E
V. Saylys, 5/GLNPO
Reading File

WHHarris/to - 3/20/80

CONCURRENCES								
SYMBOL								
SURNAME								
DATE								

EPA FORM 1320-1

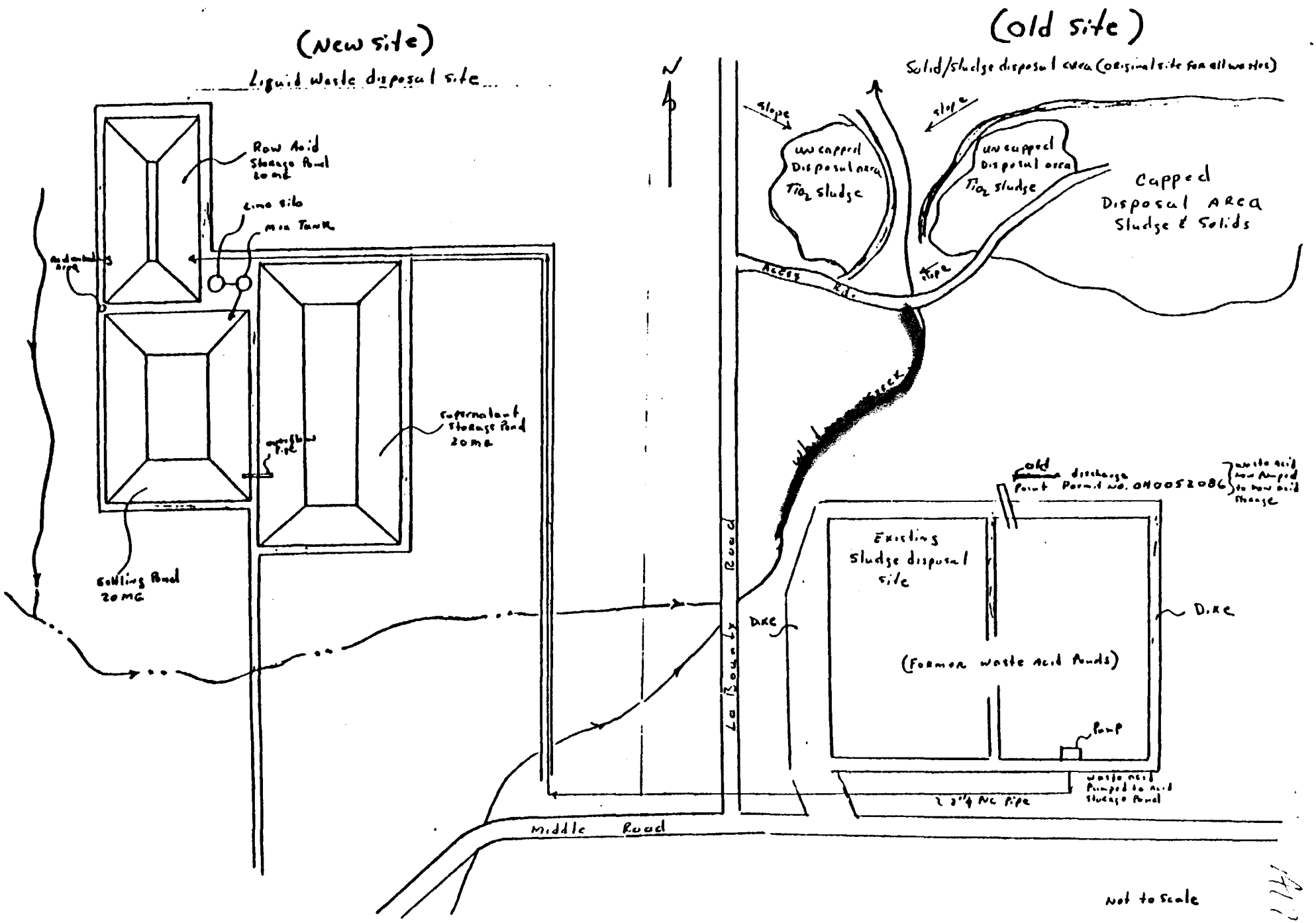
OFFICIAL FILE COPY

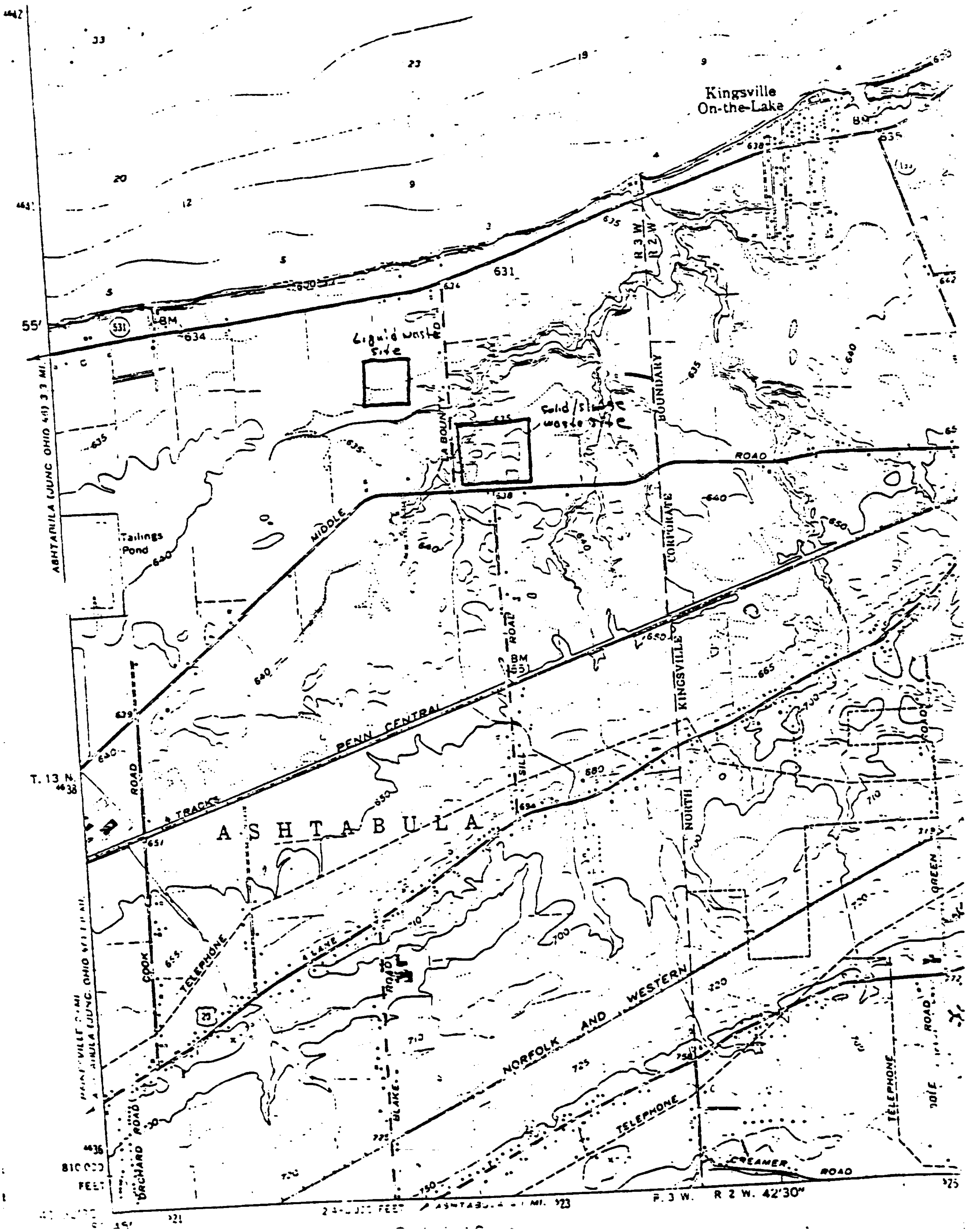
	1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
1.	Diamond Shamrock Analytic System Div	216-951-0898	Chardon, Ohio	1. Hydrochloric Acid
2.	Diamond Shamrock Semi-Works	216-997-5251	Ashtabula, Ohio	1. various organic chemicals for washing steps
				2. Sludges
				3. Daconil (fungicid
				4. DPM
				5. aqueous waste from chlorination scrubbe
3	General Tire	216-998-1120	Ashtabula, Ohio	1. sludge from process waste water settling may contain [redacted]
4.	Western Natural Resources	216-997-5501	Ashtabula, Ohio	1. TiO_2 sludge from Treatment-Conta Vanadium and other metals
				2. Metal oxides
5.	VAMCO Controls	216-576-4070	Jefferson, Ohio	[redacted]
6.	Glidden-Durkee		Ashtabula, Ohio	1. waste acid from mfg. of TiO_2 Pigment-High metal content (Fe, Mn, Ni, Zn)
				2. TiO_2 Sludge - Contain Traces of metal components

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
Olin Corp		Ashtabula, Ohio	1. Spent Sodium Hydroxide
			2. Toluene Diisocyanate
			3. Kontrabothom-a solid material with the following ingredients
			Isocyanarates
			Carbodiimidos
			Methyl-benzimidazolow
			Ureas
			Chlorinated TDI
8. RMI Sodium Plant		Ashtabula, Ohio	1. Sludge from purification of salt and neutralization of chlorine
9. RMI metals Reduction		Ashtabula, Ohio	1. TiO_2 Sludge
10. I.M.C. Corp		Ashtabula, Ohio	1. Waste Acid
11. Sherwin Williams		Ashtabula, Ohio	1. Waste Acid
			2. Metals

(site Sketch)

Reserve Environmental Services




Kingsville
On-the-Lake
Liquid waste site
Solid/Sludge waste site
Tailings Pond
MIDDLE
ROAD
LA BOUNTY
BOUNDARY
CORPORATE
KINGSVILLE
NORTH
R 3 W
R 2 W
PENN CENTRAL
4 TRACKS
A S H T A B U L A
SILL
COOK
ROAD
TELEPHONE
4 LANE
BLAKE
NORFOLK AND WESTERN
GREEN
CREAMER
ORCHARD ROAD
T. 13 N.
55'
42'30"
ASHTABULA (JUNC OHIO 41) 3.3 MI.
810 000 FEET

Glacial Map of Ohio 1967

Map of Surface Geology

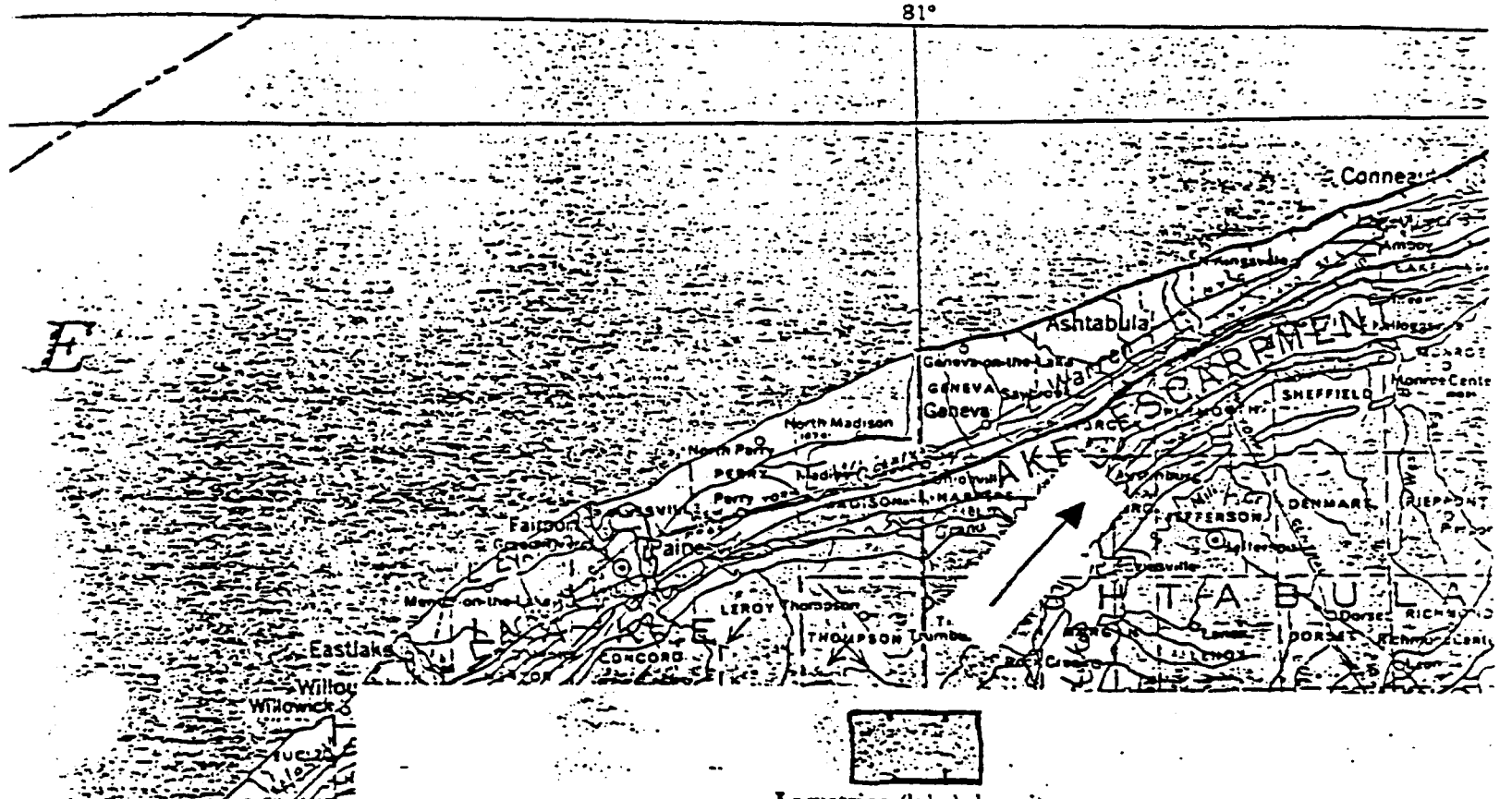
A17

N
W E
S

Scale (Approx)
1.25 inch = 20 miles

MISCELLANEOUS GEOLOGIC INVE
MAP I-316

81°



Lacustrine (lake) deposits

Silt and clay, commonly laminated, in places covered by marl and peat. Range from 5 to 50 feet in thickness and commonly are underlain by till. Deposited in temporary lakes (including those in the Lake Erie basin) dammed to the north by retreating ice and to the south by bedrock "highs" or end moraines

Gen Corp/General Tire			TWMIC Index
GT-101	Vinyl Chloride (MVC)	2.9 mg/L (2.0 perm.) 4.1 kg/day (3.3 perm.)	1978
GT-102	" "	2.2 mg/L (2.0 perm.)	1978
GT-103	" "	0.25 mg/L	1978
GT-104	Mercury (Hg)	1.0, 1.5 ug/L	1978
GT-105	Vinyl Chloride (MVC)	.05 ppm	1979
GT-106	Bis(2-ethylhexyl) phthalate Chloroform ($ChCl_3$) Trichloroethylene (TCE) Tetrachloroethylene (PCE) Chlorobenzene (MCB)	2.4 ppb 74 " 290 " 3.4 " 4.0 "	1980
GT-107	MVC	3.18 mg/L 4.47 kg/day	1981
GT-108	(001) Trichloroethylene (TCE) Chloroform ($CHCl_3$) (cen) TCE	4, 3, 40 mg/L 3 " 199 "	1983
GT-109	MVC violation	2.5 mg/L (2.0 perm.) 3.32 kg/day (3.3 perm.)	1982
GT-110	MVC	0.080 mg/L 0.062 kg/day	1985
GT-111	MVC	2.0 mg/L 6.8 lbs./day	
GT-112	MVC Limits	3.3 kg/day, avg. 2 mg/L, avg. (10 kg/day max.) (6 mg/L max.)	1978

GT-113	MVC Limits	3.3 kg/day, avg. 2 mg/L, avg. (10 kg/day max.) (6 mg/L max.)	1981
GT-114	TCE	53.49 ug/L	1981
GT-115	New MVC Limites - 100 x smaller (approx.)		1984
GT-116	Vinyl Chloride (VCL)	3.23 mg/L 6.14 kg/day	1984
GT-117	VC minor violation	0.29 mg/L (0.25 perm.)	1984
GT-118	MVC stripper to lower conc. to less than 10 ppm		1983
GT-119	MVC data - 1982-84 Summary 50 readings over 0.25 mg/L 14 " " 1.50 " 10 " " 2.0 " 8 " " 2.5 "		1985
GT-120	TCE	290, 28, 119 ug/L D. Barna Report Toxics Summary	1981
GT-121	Acute toxicity to Daphnia pulex bioassay		1981
GT-122	$CHCl_3$ TCE PCE MCB (reeat of GT-106)	74 ug/L 290, 28, 19 ug/L 3.4, 1.7 " 4.0 "	1980
GT-123	Repeat of GT-106 and GT-122)		1982 D. Barna Revised Report

GT-124	123,000 lbs VC incinerated/mo 160,000 " VC cont. sludge/mo	-
*GT-125	$CHCl_3$ at 74 ug/L TCE " 290 " TCA " 1 " PCE " 3.4 " MCB " 4.0 " Repeat of GT-122 and GT-106, D.Barna and D. Easterling's "Toxics Summary Report, Att.13.	1980

*USEPA File, Westlake, Ohio

GT-126	Heavy rainwater would flood wasteponds and run into Field's Brook.	1985
GT-127	123,000 lbs VC burned per month.(Where does scrubber water go?)	1979
GT-128	Waste solvent incinerator - Permit to install cyclohexanone, acetone and carbon disulfide - no control equipment appl. for; used as fuel oil.	1981
GT-129	8690 lbs of vinyl chloride (VC) lost when relief valve failed. (EPA Memo)/ 3740 lbs. lost to atmosphere. (Numerous other similar occurences referenced - reported as atmospheric discharge)	1982
GT-130	VC to PVC process description	1976
GT-131	MVC levels in wastewater slurry at: 6.8 ppm 5.3 ppm, both in compliance	1978
GT-132	RVCM (REsidual VC Monomer in PVC) exceeds permit limit of 400 ppm on 53 occasions in 3 months. (Leads to uncontrolled loss of VC from stored PVC).	1982
GT-133	4,000 lbs VC vented to atmoshpere during power failure incident (35 min.)	1983

Re: NPDES Permit No. P 306 *80

Mr. G. E. Brumbaugh
Technical Superintendent
General Tire and Rubber Company
Middle Road
P.O. Box 68
Ashtabula, Ohio 44004

January 17, 1978

Dear Mr. Brumbaugh:

Please consider this letter as a supplement to our letter dated January 4, 1978, concerning violations of NPDES permit conditions. During the month of November, these additional instances of non-compliance were noted:

				Permit Limitation	
11-23-77	Max COD Loading Reported	433	kg/day	385	kg/day
Average	COD Concentration Reported	175	mg/l	150	mg/l
Average	[redacted]			2.0	mg/l
Average	[redacted]			3.3	kg/day

Please be advised that non-compliance with the provisions of your NPDES Permit, including failure to comply with the limitations of the effluent characteristics as well as monitoring and reporting requirements may be subject to enforcement action pursuant to the Ohio Revised Code, Chapter 6111.

Please inform us in writing within ten (10) days of receipt of this letter as to the reasons for these excursions from the provisions of your NPDES Permit as well as a description of the steps you have initiated to prevent any further recurrence of the above cited excursions. If you have any questions regarding the above, please contact the writer at 425-9171.

Very truly yours,

William Skowronski, P.E.
District Engineer

/fmk

cc: Andrew Turner, Industrial Wastewater, CO
cc: Dan Ranft, Authorization & Compliance, NEDO

SUMMARY

Despite efforts at improved control of organic material in the plant effluent, General Tire continues to experience difficulty in controlling COD of the wastewater. To a lesser degree, BOD_5 and monovinyl chloride problems have [redacted].

It is expected that the plans due March 1, 1978, will discuss any necessary remedial activity in addition to outlining the overall company approach to environmental control.

GENERAL TIRE

GTR CHEMICAL COMPANY

P.O. BOX 68 • ASHTABULA, OHIO 44004

PHONE: (216) 998-1120

September 26, 1978

Ohio EPA
Northeast District Office
2110 E. Aurora Road
Twinsburg, Ohio 44087

Attention: Mr. William T. Skowronski

Gentlemen:

The July excursions from our NPDES permit conditions were caused by the installation of new VCM recovery equipment as required by Federal EPA.

To meet the Federal EPA requirement for residual VCM in the stripped slurry, our present strippers had to be modified and, in some cases, replaced. During the month of July we were in the process of removing the old equipment, installing the new and running the plant with only part of our recovery equipment.

The recovery systems are now installed and running well. The values for residual vinyl chloride and BOD were well within permit conditions during the month of August. With the installation and startup of the water stripper, further results should continue to be within our permit limitations.

Yours truly,

G. E. Brumbaugh

G. E. Brumbaugh
Technical Superintendent

GEB:sm

cc: A. D. Jeffrey
R. W. Laundrie

Re: NPDES Permit No. F306

The General Tire & Rubber Company
P. O. Box 68
Ashtabula, Ohio 44004

September 19, 1978

Attn: G. E. Brumbaugh

Gentlemen:

We are in receipt of your latest Self Monitoring Report covering the month of July 1978 for the above captioned facility. Upon review, we have noticed some violations of NPDES permit conditions. Specific instances of non-compliance and/or deficiencies are as follows:

Date	Parameter	Permit Limit	Reported Value
7-19-78	BOD (mg/l)	33	47
7-19-78	BOD (KGD)	54	58.8
Mo. Avg.	[redacted]	1.0	2.2

Please be advised that non-compliance with the provisions of your NPDES permit including failure to comply with the limitations of the effluent characteristics, as well as monitoring and reporting requirements, may be subject to enforcement action pursuant to the Ohio Revised Code, Chapter 6111.

Please inform us in writing within ten (10) days of receipt of this letter as to the reasons for these excursions from the provisions of your NPDES permit, as well as a description of the steps you have initiated to prevent any further recurrence of the above cited excursions. If you have any questions regarding the above, please contact the writer at 425-9171.

Yours truly,

William T. Skowronski, P.E.
Industrial Wastewater Group Chief

WTS:llw

cc: Authorization & Compliance, NEDO
Andrew Turner, Industrial Wastewater, CO

THE GENERAL TIRE & RUBBER COMPANY
CHEMICAL / PLASTICS DIVISION, P. O. BOX 68 • ASHTABULA, OHIO 44004

Mr. William Skowronski
Ohio EPA
Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087

June 20, 1978

Dear Mr. Skowronski,

The attached table lists the test results for the water samples taken by Ohio EPA personnel during the period of 6/7/78 to 6/8/78. Included in the test date for General Tire's normal monthly water sample taken on 6/7/78
If there are any questions, please advise.

Sincerely,

R. P. Alvia

Chief Chemist

/cdw

CC

G. E. Brumbaugh
H. E. Jewett

12255

	EPA NON PRESERVED	EPA H_2SO_4 ADDED	EPA HNO_3 ADDED	G.T. &R. NORMAL MONTHLY SAMPLE
pH 00403	7.7	-	-	7.8
BOD, Mg/L 00310	11	7	8	11
COD, Mg/L 00340	85	81	85	89
TSS, Mg/L 00530	11	9	4	12
TDS, Mg/L 00515	530	1,080	750	640
[redacted]	0.23	0.25	0.25	[redacted]
RESIDUAL CHLORINE, Mg/L 50060	<0.1	-	-	<0.1

SAMPLING RESULTS - JUNE 7 AND 8, 1978

Parameter	Permit Limit	OEPA Comb. Outfall	OEPA WWTP	Company Split Sample	Company Mo. Sample
pH (S.U.)	6.0 - 9.0	---	7.7	7.8	7.8
BOD (mg/l)	33	13	7.3	11	17
COD (mg/l)	290	65	68	85	89
TSS (mg/l)	60	68	10	11	12
TDS (mg/l)	1,570	510	570	530	640
MVC (mg/l)	6	Neg.	Neg.	0.23	0.23
Res. Chl. (mg/l)	0.3	<.2	<.2	<1	<.1
[illegible] (mg/l)	—	1.0	1.3	—	—

SUMMARY

A review of the sampling results reveals the company to be in compliance with their permit limitations. There is concern over the level of mercury in the company's discharge during the compliance monitoring inspection. Another sampling survey will be conducted in the near future. It is recommended that the company review this situation as soon as possible.

INDUSTRIAL COMPLIANCE MONITORING REPORT

THE GENERAL TIRE AND RUBBER COMPANY
CHEMICAL/PLASTICS DIVISION
P.O. Box 68
Ashtabula, Ohio 44004

Ohio EPA NPDES Permit No. F 306 *BD

Prepared by

William Skowronski
Office of Wastewater

October 19, 1978

GENERAL TIRE

GTR CHEMICAL COMPANY

P.O. BOX 68 • ASHTABULA, OHIO 44004

PHONE: (216) 998-1120

July 31, 1979

Ohio EPA
Northeast District Office
2110 E. Aurora Road
Twinsburg, Ohio 44087

Attention: Melinda Merryfield-Becker

Gentlemen:

The following are General Tire's test results for the 24 hour composite sample taken by Ohio EPA on Tuesday, July 17, 1979:

pH	7.4
T.S.S.	20 mg/l
T.D.S.	766 mg/l
BOD	18 mg/l
COD	90 mg/l
Vinyl Chloride	.67 ppm

If there are any questions pertaining to this data, please call Dave Slota or myself.

Very truly yours,

G. E. Frumbaugh
Technical Superintendent

GEF:rm

cc: D. Slota
M. Kierstead

from General Tire Corporation, As[illegible]la - January 22-23, 1980. (Continued)
(One 24-hour Compo[illegible] Sample)

Date Collection Time Period	1/22-23/80 0945-0915
	Sample Number and Concentration (ppb)
Compounds Detected	EDO473 80-EM04S01
1,2-Dichlorobenzene	< 0.1
1,4-Dichlorobenzene	< 0.1
Trichlorobenzene	< 0.1
Naphthalene	< 0.1
Diethyl Phthalate	< 0.1
Fluoranthene	< 0.2
Pyrene	< 0.2
[illegible]	[illegible]
Isophorone	< 0.7
Phenanthrene	0.5
Anthracene	0.5
1-(2-Butoxyethoxy)ethanol*	< 0.1
Tetrachlorobenzenene	< 0.1
Dimethyl Naphthalene*	< 0.1
Phenol*	< 0.1
Benzonitrile*	< 0.1
1-Methyl-4-Ethenyl Benzene*	< 0.1
Phenyl Ethanone*	< 0.1
Methyl Phenol*	< 0.1
Dimethyl Phenol*	< 0.1
1,1-2-ethyl biphenyl*	< 0.1
Unknown Silyl Compounds*	< 0.1
Di-n-Butyl Phthalate*	< 0.1
Total Aliphatic Hydrocarbons*	< 0.1
Other Unidentified Compounds	< 0.1

Concentrations of all compounds denoted (*) were estimated versus the response of other compounds.

Attachment 4
(Continued)

Volatile Organic Analysis of Effluent from
General Tire Corporation, Ashtabula - January 22-23, 1980
(3 grab samples)

Date/Time of Collection	1-22-80/0950	1-22-80/2215	1-23-80/0915	
	Sample Number and Concentration (ppb)			
Compounds Detected	VOA #1 EDO473 80-EM04S04	VOA #2 EDO473 80-EM04S05	VOA #3 EDO473 80-EM04S06	Reagent Blank EDO473 80-EM04R07
1,1-Dichloroethane	<1.1	<1.1	<1.1	11.8
1,2-Dichloroethylene	<1.1	<1.1	<1.1	<1.1
[illegible]	<1.5	7[illegible]	<1.5	<1.5
1,2-Dichloroethane	<1.1	<1.1	<1.1	<1.1
1,1,1-Trichloroethane	<1.7	<1.7	<1.7	<1.7
Carbon Tetrachloride	4.5	5.7	<1.8	<1.8
Bromodichloromethane	<3.8	<3.8	<3.8	<3.8
1-Bromo-2-Chloroethane	<4.6	<4.6	<4.6	<4.6
1,2-Dichloropropane	<0.7	<0.7	<0.7	<0.7
Trans-1,3-Dichloropropene	<1.7	<1.1	5.5	<0.7
Benzene	<0.5	<0.5	<0.5	<0.5
[illegible]	290	28	19	<6.0
Chlorodibromomethane	<1.5	<1.5	<1.5	<1.5
1,1,2, Trichloroethane	<1.5	<1.5	<1.5	<1.5
Cis-1,3-Dichloropropene	<1.5	<1.5	<1.5	<1.5
Bromoform	<1.4	<1.4	<1.4	<1.4
1,1,2,2-Tetrachloroethane	1.0	<1.0	<1.0	<1.0
[illegible]	3.4	1.7	<0.3	<0.3
Toluene	5.6	0.5	4.0	5.0
[illegible]	<0.3	0.8	<0.3	<0.3
1-methoxy-1-propene*	670	21	660	<0.5
1,1 Oxybisethane*	5.3	460	<0.1	<0.5
1,1,2-Trichloro - 1,2,2-Trifluoroethane*	4.9	1.6	<0.1	<0.5

addition, three special tests were performed at this facility in order to check for the presence of any toxic pollutants in the company discharge. These tests included two static bioassay tests, scans for organic pollutants, and the Ames test.

5. Summary of Findings and Conclusions

a. The sample results from this compliance inspection show General Tire to be achieving the limits contained in the NPDES permit. Self-monitoring data, however, indicates General Tire has had problems in the past meeting the limits contained in the permit. The company achieved all permit requirements in only two of twelve months in 1979. These records indicate that the plant has exceeded the BOD_5, COD, total suspended solids and total dissolved solids limits contained in the permit.

b. The Company was found to be doing the dissolved solids analysis incorrectly. A drying temperature of 105°C was being used instead of the 180°C specified in standard EPA methods. The Ohio EPA mistakenly told the company to use the incorrect temperature. The company was informed during this inspection that the correct drying temperature is 180°C.

c. Based upon the data collected during this study a high concentration of zinc in the General Tire discharge increases the zinc level in Fields Brook above Ohio WQS for a Warmwater Habitat. Zinc is not limited in the NPDES permit and the discharger does not monitor this metal.

d. Eleven volatile and three non-volatile organics were found to be present in the General Tire discharge. These compounds and their reported concentrations are listed below.

Volatile Organics Detected
(3 grab samples)

1. [redacted] µg/l)
2. carbon tetrachloride (4.5 µg/l, 5.7 µg/l)
3. trans-1,3-dichloropropene (5.5 µg/l)
4. [redacted]
5. 1,1,2,2-tetrachloroethane (1.0 µg/l)
6. [redacted]
7. toluene (5.6 µg/l, 0.5 µg/l, 4.0 µg/l)
8. [redacted]
9. 1-methoxy-1-propene (670 µg/l, 21 µg/l, 660 µg/l)
10. 1,1 oxybisethane (5.3 µg/l, 460 µg/l)
11. 1,1,2-trichloro-1,2,2 trifluoroethane (4.9 µg/l, 1.6 µg/l)

Non-Volatile Organics Detected
(one 24-hour composite sample)

1. [redacted]
2. phenanthrene (0.5 µg/l)
3. anthracene (0.5 µg/l)

The first eight volatile organics listed and all three non-volatile organic compounds are priority pollutants.

e. The Ames Test performed on the General Tire effluent sample proved to be negative. That is the effluent did not induce a mutagenic/carcinogenic response in the test bacteria.

U.S. Environmental Protection Agency
Region V
Surveillance & Analysis Division
Eastern District Office

Compliance Monitoring Field Report

1. Permittee Identification

General Tire & Rubber Company
Middle Road P.O. Box 68
Ashtabula, Ohio 44004
(216) 998-1120

Corporate Office:

The General Tire & Rubber Company
1 General Street
Akron, Ohio 44309
(216) 798-3000

NPDES Permit: OH 0002283

Receiving Stream: Fields Brook to Ashtabula River

Responsible Official:

Gerald E. Brumbaugh
Technical Superintendent, Ashtabula Plant

2. Dates of Inspection and Survey: January 22-23, 1980

3. Participants

Permittee

Gerald E. Brumbaugh, Technical Superintendent

Ohio EPA

Melinda Becker, Environmental Scientist
Mark Baumgardner, Environmental Scientist

U.S. EPA

Mark Moloney, Environmental Engineer, Author
Charles Beier, Engineering Technician
Joseph Good, General Mechanic
Philip Gehring, Chief, Field Section
Roland Hartranft, Engineering Technician

4. Objective

This compliance sampling inspection was conducted pursuant to a December 19, 1979 Enforcement Division request. The purpose of this study was to verify compliance with NPDES permit OH 0002283 and applicable stream standards. In

F306
FX

CONTINUED FROM PAGE V-4

EPA I.D. NUMBER (copy from Item 1 of Form 1): OH 000 2283

OUTFALL NUMBER: F306601

Form Approved OMB No. 158-R0173

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. Test Required	b. Believed Present	c. Believed Absent	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) Concentration	a. MAXIMUM DAILY VALUE (2) Mass	b. MAXIMUM 30 DAY VALUE (if available) (1) Concentration	b. MAXIMUM 30 DAY VALUE (if available) (2) Mass	c. LONG TERM AVG. VALUE (if available) (1) Concentration	c. LONG TERM AVG. VALUE (if available) (2) Mass	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVG. VALUE (1) Concentration	5. INTAKE (optional) a. LONG TERM AVG. VALUE (2) Mass	5. INTAKE (optional) b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)	X			.01	.012					1	mg/L	Kg/day			
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X			N.D.						1	"	"			
24V. Tetrachloroethylene (127-18-4)	X			N.D.						1	"	"			
25V. Toluene (108-88-3)	X			N.D.						1	"	"			
26V. 1,2-Trans-Dichloroethylene (540-59-0)	X			.03	.036					1	"	"			
27V. 1,1,1-Trichloroethane (71-55-6)	X			N.D.						1	"	"			
28V. 1,1,2-Trichloroethane (79-00-5)	X			N.D.						1	"	"			
29V. Trichloroethylene (79-01-6)	X			.04	.049					1	"	"			
30V. Trichlorofluoromethane (75-69-4)	X			N.D.						1	"	"			
Chloroform (67-66-3)	X			3.18	4.47	0.75	0.99	0.27	0.34	[illegible]	[illegible]	[illegible]			
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X			N.D.						1	"	"			
2A. 2,4-Dichlorophenol (120-83-2)	X			"						1	"	"			
3A. 2,4-Dimethylphenol (105-67-9)	X			"						1	"	"			
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			"						1	"	"			
5A. 2,4-Dinitrophenol (51-28-5)	X			"						1	"	"			
6A. 2-Nitrophenol (88-75-5)	X			"						1	"	"			
7A. 4-Nitrophenol (100-02-7)	X			"						1	"	"			
8A. P-Chloro-M-Cresol (59-50-7)	X			"						1	"	"			
9A. Pentachlorophenol (87-86-5)	X			"						1	"	"			
10A. Phenol (108-95-2)	X			"						1	"	"			
11A. 2,4,6-Trichlorophenol (88-06-2)	X			"						1	"	"			

RECEIVED
MAR 24 1981
OHIO ENVIRONMENTAL PROTECTION AGENCY
N.E.D.O.

F306 & FX

Please print or type in the unshaded areas only (if in area is labeled for elite type, i.e., 12 characters)

Form Approved OMB No. 158-R0175

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F 0 H 0 0 0 2 2 8 3 D

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (*the area to the left of the label space lists the information that should appear*), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI (*except VI-B which must be completed regardless*). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK "X" YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	MARK "X" YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility (*either existing or proposed*) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	X			D. Is this a proposed facility (*other than those described in A or B above*) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X			F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)				J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)			

III. NAME OF FACILITY

1 SKIP THE GENERAL TIRE AND RUBBER COMPANY

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2 BAUMBAUGH GERALD E TECH SUPT	216 998 1120

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 P O BOX 68

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 ASHTABULA	OH	44004

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 MIDDLE ROAD

B. COUNTY NAME

ASHTABULA

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
6 ASHTABULA	OH	44004	

EPA Form 3510-1 (6-80)

CONTINUE ON REVERSE

Incinerator	1	2	3	4	2C
1,1,1 Trichloroethane	14	2	–	–	
Trichloroethylene	7	1	–	–	
Vinyl Chloride	301	–	22	AA	
Chloroform	15	3	AA	AA	
Methylene Chloride	–	34	12	–	

No. 3 Pond (OUTFALL 001)

dichloro ethane	–	–	–	–	30
1,1,1 Trichloroethane	20	2	–	–	–
1,1,2 Trichloroethylene	4	3	–	–	140
[redacted]					–
Vinyl Chloride	–	–	16	20	4470
Trichloro ethene	–	–	1,3	1,3	–
Dichloro ethane	–	–	0,7	–	60
Methylene Chloride	–	–	–	AA	10
1,1,1 Trichloro ethene	–	–	1,8	–	–
dichloro ethylene	–	–	–	–	30

AA = qualitively identified but below analytical detection limits (10 ppb)

– = not identified
samples taken as 24 hour composites
2C - denotes Renewal application Data

Summary of Process Evaluation
Study and NPDES Permit Renewal Appli
Form 2C Analytical DATA

Location. Ashco Intake Parameter (ppb)	Sample 1	2	3	4
1,1,1 Trichloroethane	63	2	2.2	0.05
Trichloroethylene	19	-	0.4	0.7
Chloroform	-	-	0.1	0.2
Centrifuge Effluent				
Chloroethane	-	-	AA	AA
1,1,1-Trichloroethane	51	3	-	80
Trichloroethylene	20	199	10	-
Vinyl Chloride	3	220	3100	150
1,2 Dichloroethane	-	2	-	AA
Chloroform	-		AA	AA
WATER STRIPPER				
1,1,1- Trichloroethane	203	42	AA	-
Trichloroethylene	49	1930	AA	120
Vinyl Chloride	19C	50,000	3100	11,000
Chloroform	-	11	AA	AA
1,2 Dichloroethane	-	78	-	AA
Chloroethane	-	-	AA	30

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE March 17, 1983

SUBJECT Compliance Evaluation Inspection (CEI) - General Tire and Rubber Company, Ashtabula, Ohio

FROM Daniel C. Watson, Physical Scientist
THRU: A.R. Winklhofer, Director, EDO

TO Engineering Section, 5WQC
ATTN: Edward DiDomenico

Attached is a copy of the CEI conducted at General Tire and Rubber Company in Ashtabula, Ohio. Attention should be paid to the following:

1. NPDES permit limitations for BOD_5 are regularly exceeded at Outfall 601 when the company is manufacturing polymers.

2. The company recently added two settling ponds (formerly owned by Olin Corporation) to its treatment system to eliminate the facility's BOD_5 excursions during polymer runs.

Attachments

Ohio EPA

Re: NPDES Permit Ohio EPA F306 *BD
Notice of Noncompliance

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

[redacted]

Mr. H. Graff, Technical Superintendent
The General Tire & Rubber Company
GTR Chemical Company
P.O. Box 68, Middle Road
Ashtabula, Ohio 44004

Dear Mr. Graff:

We are in receipt of your letter of May 11, 1982, which informs us of certain instances of noncompliance with NPDES permit conditions during the month of April, 1982. The specific instances of noncompliance are as follows:

OUTFALL 601

Parameter	Reported	Permit	Day
BOD_5 (mg/l)	49	33	07
	39	33	14
	41	33	21
	43	20	Mo. Avg.
(kg/day)	55.6	54	07
	55.7	54	21
	53.8	32	Mo. Avg.
TSS (mg/l)	27	20	Mo. Avg.
(kg/day)	34	32	Mo. Avg.
[redacted]	[redacted]	[redacted]	Mo. Avg.
	[redacted]	[redacted]	Mo. Avg.

This is the [redacted] that the company has been in noncompliance with its permit. We cannot renew your NPDES permit until the company comes into compliance with its existing permit requirements. Such noncompliance has been ongoing on a periodic [redacted] has not been corrected.

It appears that the company has been unable to address the specific concerns raised in our letter of April 13, 1982. Perhaps the company should seek outside assistance in an effort to develop cost effective solutions to its particular problems.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE MONITORING REPORT

Form Approved
OMB NO. 158-R0011

[redacted] Rubber Co.
Chemical/Plastics Division
PVC Plant
P. O. Box 63, Middle Road
Ashtabula, Ohio 44004

STATE	PERMIT NUMBER	DISCHARGE NUMBER	SIC	LATITUDE	LONGITUDE
OH	F306 * FD	001	2821	41°55'07"	81°15'30"

REPORTING PERIOD: FROM 81 01 01 (YEAR MO DAY) TO 81 01 31 (YEAR MO DAY)

INSTRUCTIONS

1. Provide dates for period covered by this report in spaces marked "REPORTING PERIOD".
2. Enter reported minimum, average and maximum values under "QUANTITY" and "CONCENTRATION" in the units specified for each parameter as appropriate. Do not enter values in spaces containing asterisks. "AVERAGE" is average computed over actual time discharge is occurring. "MAXIMUM" and "MINIMUM" are extreme values observed during the reporting period.
3. Specify the number of analyzed samples that exceed the maximum (and/or minimum as appropriate) permit conditions in the columns labeled "No. Ex." If none, enter "0".
4. Specify frequency of analysis for each parameter as No. analyses/30 days (e.g., "1/D" is equivalent to 1 analysis performed every 7 days.) If continuous enter "CONT."
5. Specify sample type ("grab" or "___ hr. composite") as applicable. If frequency was continuous, enter "N/A".
6. Appropriate signature is required on bottom of this form.
7. Retain carbon and retain copy for your records.
8. Fold along dotted lines, staple and mail Original to office specified in permit.

PARAMETER		QUANTITY (2 decimal places) MINIMUM	QUANTITY AVERAGE	QUANTITY MAXIMUM	QUANTITY UNITS	NO. EX.	CONCENTRATION (4 decimal places) MINIMUM	CONCENTRATION AVERAGE	CONCENTRATION MAXIMUM	CONCENTRATION UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow 50050	REPORTED	.148	202	282	MGD		.148	202	282	MGD		Cont	TA
	PERMIT CONDITION	N/A	N/A	N/A			N/A	N/A	N/A			Cont	TA
Temp 00010	REPORTED	34	36	41	°F		34	36	41	°F		Cont	TA
	PERMIT CONDITION	N/A	N/A	N/A			N/A	N/A	N/A			Cont	TA
pH 00403	REPORTED	7.1	7.6	8.4	pH		7.1	7.6	8.4	pH		1/1	Grab
	PERMIT CONDITION	6.0		9.0			6.0		9.0			1/1	Grab
B.O.D. 00310	REPORTED	3	5	6	Kg/day		4	6	8	mg/l		1/30	24 Hr. Comp.
	PERMIT CONDITION		22	54				27	43			1/30	24 Hr. Comp.
C.O.D. 00340	REPORTED	17	31	60	Kg/day		22	41	56	mg/l		1/30	24 Hr. Comp.
	PERMIT CONDITION			136				120	240			1/30	24 Hr. Comp.
T.S.S. [illegible]	REPORTED	4	8	10	Kg/day		7	11	14	mg/l		1/30	24 Hr. Comp.
	PERMIT CONDITION		32	67				50	100			1/30	24 Hr. Comp.
T.O.C. 00535	REPORTED	185	318	414	Kg/day		290	414	568	mg/l		1/30	24 Hr. Comp.
	PERMIT CONDITION			2253					1500			1/30	24 Hr. Comp.
Vinyl Chl. [illegible]	REPORTED	.011	.026	.062			.016	.034	.088			1/30	24 Hr. Comp.
	PERMIT CONDITION		.3	1				2	5			1/30	24 Hr. Comp.

NAME OF PRINCIPAL EXECUTIVE OFFICER: Jackson R. L.
TITLE OF THE OFFICER: Plant Manager
DATE: 02 01 81 (YEAR MO DAY)

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

Roy L. Jackson
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR DULY AUTHORIZED AGENT

EPA Form 3320-1 (Rev. 3-76)

ORIGINAL

PAGE ___ OF ___

F 306

FORM APPROV
OMB NO. 49-R 0

F306

DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS

APPLICATION FOR PERMIT TO DISCHARGE OR WORK IN NAVIGABLE WATERS AND THEIR TRIBUTARIES

04000283

SECTION I. GENERAL INFORMATION

1. State	Application Number (to be assigned by Corps of Engineers)
O H	Div. 74 Dist. 82 Type 13 Sequence No. 22114

2. Name of applicant and title of signing official: The General Tire & Rubber Company
S. Salem, Vice President

3. Mailing address of applicant:
The General Tire & Rubber Company
Chemical Division
One General Street
Akron, Ohio 44309

s, telephone number and title of applicant's authorized agent for permit application coordination and correspondence.
Joseph P. Ludd, Plant Manager
The General Tire & Rubber Company
Middle Road
Ashtabula, Ohio
998-1120

ORIGINAL APPLICATION FROM CORPS
DO NOT REMOVE

.ICANT: Refer to the pamphlet entitled "Permits for Work and Structures in and for Discharges or Deposits into Navigable Waters" before attempting to complete this form.

nation
ation contained in this application will, upon request, be made available to the public for inspection and copying. A separate sheet Confidential Answers" must be used to set out information which is considered by the applicant to constitute trade secrets or com- financial information of a confidential nature. The information must clearly indicate the item number to which it applies. Con- eatment can be considered only for that information for which a specific written request of confidentiality has been made on the heet. However, in no event will identification of the contents and frequency of a discharge be recognized as confidential or privileged n.

ant shall furnish such supplementary information as is required by the District Engineer in order to evaluate fully an application. al space is needed for a complete response to any item on this form, attach a sheet entitled "Additional Information." Indicate on the item numbers to which answers apply.

equired by items 20 and 21 should be attached to this application. Other papers which must be attached to this application include, e, copies of a water quality certification or a written communication which describes water quality impact (see Item 22 and Item 10 II below), the additional information sheet(s) in "c" above, and the confidential information sheet described in "a" above.

harge or deposit is involved, an application fee of $100 must be submitted with this application. An additional $50 is required for each ..... point of discharge or deposit.

Signature
a. If a discharge is involved, an application submitted by a corporation must be signed by the principal executive officer of that corporation or by an official of the rank of corporate vice president or above who reports directly to such principal executive officer and who has been designated by the principal executive officer to make such applications on behalf of the corporation. In the case of a partnership or a sole proprietorship, the application must be signed by a general partner or the proprietor. Other signature requirements are discussed in the pamphlet.
b. If no discharge is involved, an application may be signed by the applicant or his authorized agent.

Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate.

X _____ Signature of Applicant

18 U.S.C. Section 1001 provides that:

Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and wilfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than five years, or both.

FOR CORPS OF ENGINEERS USE ONLY

Acronym name of applicant

Are discharge structures: Major? ☐ Minor? ☐ N/A? ☐

	day	mo	yr
Date received, form not complete	— —	— — —	— —
Date received, form complete but without certificate	— —	— — —	— —
Date received, form complete Date of Cert./Ltr.	— —	— — —	— —
Date sent to EPA, form not complete	— —	— — —	— —
Date sent to EPA, NOAA, D/I, AEC, FPC in complete form	— —	— — —	— —

ENG FORM 4345
MAY 71

F 306 •AX

PART B

(Office use only)

Discharge Serial No.
001

B-2. (cont.) CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)

	Intake	Discharge									
PARAMETER AND CODE	UNTREATED INTAKE WATER (1)	TREATED INTAKE WATER (2)	MAXIMUM CONCENTRATION (3)	MAXIMUM POUNDS PER DAY PER PROCESS UNIT (4)	MAXIMUM POUNDS PER DAY (5)	DAILY AVG. CONCENTRATION (6)	AVERAGE POUNDS PER DAY (7)	SAMPLE TYPE (1) (8)	SAMPLE FREQUENCY (9)	METHOD OF ANALYSIS (10)	CONTINUOUS MONITORING (11)
PHENOLS 32730	W < 20	< 20	< 20	0.0	0.0	< 20	0.0	X	D	S	A
SURFACTANTS 38260	< .05	< .05	< .05	1.7	1.7	.05	1.7	X	D	S	A
ALGICIDES* 74051	-										
CHLORINATED HYDRO-CARBONS* (EXCEPT PESTICIDES)	(2) [illegible] Vinyl Chloride	[illegible]	[illegible]	41.0	41.0	2.0	6.8	A	D	S	A
PESTICIDES* 74053	-										

*Name specific compound(s) and fill in the required data for each. Use extra blanks at the end of the form and the "Remarks" space as necessary.

(1) Sample type for maximum concentration was a grab sample in all cases.

(2) Hexane extraction, vapor phase chromatagram

ENG FORM 4345-1 JUN 71

Page [illegible] of 7

Permit No. OH 0002283 F306-HSY

ATTACHMENT 'A'

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date and lasting [redacted]5 the permittee is authorized to discharge from outfall(s) serial 001 . Such discharges shall be limited and monitored by the permittee as specified below:

		Discharge Limitations kg/day (lbs/day)		Other Limitation (Specify Unit)		Monitoring Requirements	
Effluent Characteristic		Daily Average	Daily Maximum	Average	Maximum	Measurement Frequency *	Sample Type
001	Flow MGD/Day (MGD)	N/A	N/A	N/A	N/A	Continuous Recording	
001	BOD	32(70)	54(120)	20 mg/l	33 mg/l	2xMonthly	Composite
001	COD	120(270)	210(470)	75 mg/l	130 mg/l	2xMonthly	Composite
001	TSS	32(70)	100(215)	20 mg/l	60 mg/l	2xMonthly	Composite
001	TDS	1450(3200)	2500(5600)	900 mg/l	1570 mg/l	2xMonthly	Composite
[redacted]	Vinyl Chloride	3.3 (7.2)	[redacted]	[redacted]	[redacted]	2xMonthly	Composite
001	Temperature	N/A	N/A	N/A	N/A	2xMonthly	Record of Maximu

*See Attachment 'C'(2)

The daily average discharge is defined as the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating.
The daily maximum discharge means the total discharge by weight during any calendar day.
The pH shall not be less than 6.0 nor greater than 9.0 . The pH shall be monitored as follows: daily grab sample

Samples taken in compliance with the monitoring requirements, above, shall be taken at the following location(s): prior to final discharge.

Monitoring reports shall summarize monitoring results obtained during the previous three months, and shall be postmarked no later than the 28th day of the month following each completed reporting period. The first report shall be submitted on April 28, 1974.

The permittee shall not discharge floating solids or visible foam in other than trace amounts.

ATTACHMENT 'A'

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS
Option A) Discharge to Fields Brook

During the period beginning April 1, 1975 and lasting until [redacted]. Such discharges shall be the permittee is authorized to discharge from outfall(s) serial 001 . limited and monitored by the permittee as specified below:

		Discharge Limitations kg/day (lbs/day)		Other Limitation (Specify Unit)		Monitoring Requirements	
	Effluent Characteristic	Daily Average	Daily Maximum	Average	Maximum	Measurement Frequency *	Sample Type
001	Flow M3/Day (MGD)	N/A	N/A	N/A	N/A	Continuous Recording	-----
001	BOD	32(70)	54(120)	20 mg/1	33 mg/1	2xMonthly	Composite
001	COD	120(270)	210(470)	75 mg/1	130 mg/1	2xMonthly	Composite
001	TSS	32(70)	100(215)	20 mg/1	60 mg/1	2xMonthly	Composite
001	TDS	1450(3200)	2500(5600)	900 mg/1	1570 mg/1	2xMonthly	Composite
001	Residual Chlorine	N/A	N/A	0.1 mg/1	0.3 mg/1	2xMonthly	Grab
001	Mono Vinyl Chloride	[redacted]	[redacted]	[redacted]	[redacted]	2xMonthly	Composite
001	Temperature	N/A	N/A	N/A	N/A	2xMonthly	Record of Max.

*See Attachment 'C'(1) & (2)

The daily average discharge is defined as the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating.
The daily maximum discharge means the total discharge by weight during any calendar day.
The pH shall not be less than 6.0 nor greater than 9.0 The pH shall be monitored as follows: daily grab sample

Samples taken in compliance with the monitoring requirements, above, shall be taken at the following location(s): prior to final discharge.

Monitoring reports shall summarize monitoring results obtained during the previous three months, and shall be postmarked no later than the 28th day of the month following each completed reporting period.

The permittee shall not discharge floating solids or visible foam in other than trace amounts.

PART I, A - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from the following outfalls: F306601. SEE PART II, OTHER REQUIREMENTS, for location of effluent sampling.

EFFLUENT CHARACTERISTIC			DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
			Concentration Other Units(Specify)		Loading kg/day			
REPORTING Code	UNITS	PARAMETER	30 day	Daily	30 day	Daily	Meas. Freq.	Sample Type
50050	MGD	Flow	-	-	-	-	Daily	24 hr Total
00310	mg/l	BOD_5	20	33	32	54	1/week	composite
00335	mg/l	COD	150	290	-	385	1/week	composite
00530	mg/l	Suspended Solids	20	40	32	67	1/week	composite
00515	mg/l	Dissolved Solids	900	1570	1450	2500	1/week	composite
50060	mg/l	Chlorine, Res.	0.1	0.3	-	-	1/month	grab
70352	mg/l	[redacted]	[redacted]				[redacted]	
00010	Deg. Cent.	Temperature	-	-	-	-	1/week	Max. Ind. Thermometer

2. The pH (Reporting Code 00400) shall not be less than 6.0 S.U. nor greater than 9.0 S.U. and shall be monitored daily by a grab sample.

3. Samples taken in compliance with monitoring requirements specified above shall be taken at Sampling Stations described in Part II, OTHER REQUIREMENTS.

4. See PART II, OTHER REQUIREMENTS.

12 596

OEPA Permit No. P306*CD

Application No. OH0002283

Effective Date:

Expiration Date: March 31, 1981

DRAFT COPY
SUBJECT TO REVISION
OEPA

OHIO ENVIRONMENTAL PROTECTION AGENCY

AUTHORIZATION TO DISCHARGE UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et. seq. hereinafter referred to as "the Act"), and the Ohio Water Pollution Control Act (Ohio Revised Code Section 6111),

General Tire and Rubber Company

is authorized by the Ohio Environmental Protection Agency, hereafter referred to as "Ohio EPA", to discharge from the wastewater treatment works located

Middle Road, Ashtabula, Ohio

and discharging to Fields Brook

in accordance with the conditions specified in Parts I, II and III of this permit.

This permit and the authorization to discharge shall expire at midnight on the expiration date shown above. In order to receive authorization to discharge beyond the above date of expiration, the permittee shall submit such information and forms as are required by the Ohio EPA no later than 180 days prior to the above date of expiration.

Ned E. Williams, P.E.
Director

12 594

Ohio Department of Health

Industrial Chemistry Section

Environmental Sample Submission Report

Agency: OEPA
Division Program: DSW 22 — IV
Analysis Reported To: ☐ CO ☐ CDO ☐ SE ☒ NE ☐ SW ☐ NW

Laboratory: ☑ Central ☐ SE ☐ NE ☐ SW ☐ NW
Sample Number: 5003
Analyst: T. Smith Supervisor: J. Hess
Date Received: 3/13/81
Date Reported: 3/30/81

Sample Identification

Station: General Tire OC1
ID Number: SC. — — — — — — — —
Address:
City: Zip:
County: Ashtabula Phone:
Collected By: Wysocki

Grab Sample Date or Beginning Date of Composite Sample — Use Military Time

Year	Month	Day	Hour	Minute	
81	03	12	07	00	Grab Sample

Ending Date of Composite Sample — Use Military Time

Year	Month	Day	Hour	Minute	CVT	S.T	TYP

Field Treatment
☐ Filtered ☐ $CuSO_4$ · H_3PO_4
☐ Iced ☐ H_2SO_4
☐ NaOH ☐ HNO_3
☐ Other (Explain)

Additional Information — Analyst Remarks — Non Routine Analytical Requests
Compliance Monitoring

Radioisotopes

Alpha Total pc l	P1501
Alpha Diss pc l	P1503
Alpha Suspd pc l	P1505.
Beta Total pc l	P3501
Beta Diss pc l	P3503.
Beta Suspd pc l	P3505
Barium 140 Total pc l	P75030
Cesium-134 Total pc l	P28414
Cesium-137 Total pc l	P28401
Iodine-131 Total pc l	P28301
Potassium-40 Total pc l	P75038.
Radium-226 Total pc l	P9501
Radium-228 Total pc l	P11501.
Strontium-90 Total pc l	P13501
Strontium-89 Total pc l	P15501.
Tritium pc l	P7000.

Volatile Organics

☒ Chloroform Total ug l	P32106	9.7 l
☐ Methylene Chloride Total ug l	P34423.	
☐ Carbon Tetrachloride Total ug l	P32102.	
☐ Bromoform Total ug l	P32104	
☐ Bromodichloromethane Total ug l	P32101.	
☐ Dibromochloromethane Total ug l	P32105.	
☐ 1,2-Dichloroethane Total ug l	P32103.	
☒ Mono Vinyl Chloride, TOTAL ug/l		<3.0
☒ [redacted]		[redacted]
☒ dichloromethane, TOTAL ug/l		<1.5

Pesticides

☐ Aldrin, Whl Sampl ug l	P39330
☐ DDD Whl Sampl ug l	P39360.
☐ DDE, Whl Sampl ug l	P39365.
☐ DDT Whl Sample ug l	P39370.
☐ Dieldrin, Whl Sampl ug l	P39380.
☐ Chlordane, Whl Sampl ug l	P39350.
☐ Endrin, Whl Sampl ug l	P39390.
☐ Heptachlor Whl Sampl ug l	P39410.
☐ Hchlr-Epoxide, Whl Sampl ug l	P39420.
☐ Lindane, Whl Sampl ug l	P39782.
☐ Methoxychlor, Whl Sampl ug l	P39480.
☐ Malathion, Whl Sampl ug l	P39530.
☐ Parathion, Whl Sampl ug l	P39540.
☐ Methyl Parathn, Whl Sampl ug l	P39600.
☐ Toxaphene, Whl Sampl ug l	P39400.
☐ 2, 4-D, Whl Sampl ug l	P39730
☐ Silvex, Whl Sampl ug l	P39760
☐ BHC, Whl Sampl ug l	P39340.
☐ Mirex Whl Sampl ug l	P39755.
☐ Diazinon Whl Sampl ug l	P39570.

Special Parameters

☐ PCB, Whl Sampl ug l	P39516.
☐ Chlorophyll A ug l	P32209.
☐ Phenols ug l	P32730
☐ Sample Purpose	P71999.
☐ Sample Code	P115.
☐	
☐	
☐	

Distribution 1—Data Processing 2—Central Office 3—District Office 4—Owner 5—Laboratory

(4989 32) Ohio Department of Health

INDUSTRIAL COMPLIANCE EVALUATION INSPECTION REPORT

General Tire and Rubber Company
Chemical/Plastics Division
Middle Road
Ashtabula, Ohio 44004

Ohio EPA Permit No. 3IF00006*FD
U.S. EPA No. OH0002283

Prepared By

William J. Miller
Environmental Engineer
Division of Water Pollution Control
Industrial Wastewater Group
Northeast District Office
August 21, 1984

12326

CONCLUSIONS

The company appeared to be in compliance with the terms and conditions of its NPDES permit at the time of inspection. However, the proposed renewal NPDES permit public noticed by Ohio EPA on June 25, 1984, would require a reduction [redacted] concentrations of almost two orders of magnitude. The company is presently discharging at levels far in excess of the proposed level.

It is unclear whether the company could meet the proposed limit by such techniques as improved housekeeping and nutrient addition to its treatment lagoons. Additionally, the company may change its product mix, including possible production of materials never before made at the plant. Therefore, since the requirements of the new permit, the maximum possible performance of the treatment system, and the company's production plans are not firmly established, it is impossible to predict whether the present level of compliance can be maintained.

POLYMERS DIVISION
(Formerly) GTR CHEMICAL COMPANY
P.O. BOX 68 • ASHTABULA, OHIO 44004
PHONE: (216) 998-1120

[redacted]

Mr. Bill Miller
OEPA NEDO
2110 East Aurora Road
Twinsburg, Ohio (44087)

Dear Mr. Miller:

The Ashtabula Plant will show the following conditions out of compliance for August:

TSS	ave	36Kg/da
TSS	Max	(42Mg/1 [redacted]

no, 32 kg/d w/qm
w/qm lb: 67 kg/d (max)

[redacted]

The Vinyl Chloride results are for the month. Since the new limit was in effect only since August 23rd, it should be noted, we did meet the interim limits for the last two weeks of the month, at .09 mg/1 and .04 mg/1.

Sincerely,

H. Graff
Technical Superintendent
Ashtabula Plant
Polymers Division
DiversiTech General
A GenCorp Division

HG/pn

SUBMITTED BY: Michael A. Savage, IWM

DATE SUBMITTED: November 20, 1984

OHIO EPA
QUARTERLY INDUSTRIAL COMPLIANCE REPORT
REPORTING PERIOD: July, August and September, 1984
EFFLUENT & EVENTS STATUS

DISTRICT: Northeast

MAJOR LIST	COMPLIANCE STATUS	ACTION TAKEN OR PROPOSED	COMMENTS
[redacted] Rubber - Ashtabula NPDES NO. OH0002283 FACN 3IF00006 EFFECTIVE 8/23/84 MOD. EFF. ____ MOD. EFF. ____ MOD. EFF. ____ MOD. EFF. / / MOD. EFF. / / EXPIRES: 8/20/89 TYPE: INITIAL ____ RENEWAL X	Effluent July In Compliance August Outfall 001 Total Suspended Solids 3 insignificant violations Reported: 42 mg/l (max) 79 kg/day (max) 35 kg/day (avg) Permit: 40 mg/l (max) 67 kg/day (max) 32 kg/day (avg) September Outfall 001 Total Suspended Solids 2 insignificant violations Reported: 21 mg/l (avg) 39 kg/day (avg) Permit: 20 mg/l (avg) 38 kg/day (avg) [redacted] Events July, August, September In Compliance	10/18/84 - Enforcement letter sent to entity from district Re: August violations. 8/24/84 - Director's Findings and Orders with schedule and interim limits issued to entity for violation of July 1, 1984 deadline. Significant schedule milestones include: a. Complete a wastewater treatment/discharge minimization study to meet final limits and submit report by 1/1/85. b. Implement corrective measures and attain compliance with final limits by 7/1/85. 11/7/84 - Enforcement letter sent to entity from district Re: September violations.	9/13/84 - Letter of noncompliance received from entity Re: August violations. 10/9/84 - Letter of noncompliance received from entity Re: September violations.

REPORT ON PLANS FOR INDUSTRIAL WASTE DISPOSAL AT GEN CORP INC., ASHTABULA COUNTY

Gen Corp Inc., hereafter "the Company", owns a plant on Middle Road in Ashtabula Township of Ashtabula County. The plant is presently shut down. When operating, the plant polymerizes various monomers such as vinyl chloride and vinyl acetate. The plant is currently under NPDES Permit No. 3IF00006*FD.

In order to achieve more consistent compliance with permit limits for biochemical oxygen demand, and for other purposes related to pollution control, in 1982 the Company made various improvements in its waste treatment system. In order to comply with Ohio Revised Code Section 6111.45 and in order to receive tax credit, on November 30, 1982, the Company filed Permit to Install Application No. 02-1069. Supplemental information was filed on June 20 and November 29, 1983. The following paragraphs and block diagram describe the plant's waste treatment systems and the improvements that are covered by this PTI application.

The old system consisted of a central waste pit (A) for the plant process sewers. Lime and alum are fed to the pit. The pit is then pumped to three (3) settling ponds (B), (D), & (E), in series. Total capacity of these ponds is about 750,000 gallons. An aeration column (C) takes a small stream, approximately 100 gpm, and recycles back into #1 pond. There is also surface aeration on ponds (D) and (E).

The first improvement, a water stripper system, was installed to reduce the level of monomer vinyl chloride to less than 10 ppm. This pre-treats any water that has been in contact with vinyl chloride. The water is collected in a tank under vacuum at 170° F and stripped for one hour. The stripped vinyl chloride is recovered and reused; the water is discharged to the central waste pit (A).

A second project was completed to ensure that water that was not treated did not escape to ground water, or the storm sewer system. This was accomplished by rebuilding the central waste pit (A), and some of the process sewer system with acid-proof brick.

The third project was to install a pre-settling tank system to reduce the solids loading at the ponds. At a location where the polyvinyl chloride resin collects, a pump and appropriate lines were installed so that a 16,000 gallon tank, already in existence, could be used to settle out usable resin. Any excess water would go to the central waste pit (A). The resin could be dried and sold as good product.

PART I, A - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from the following outfall: 3IF00006001. SEE PART II, OTHER REQUIREMENTS, for location of effluent sampling.

EFFLUENT CHARACTERISTIC			DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
			Concentration Other Units (Specify)		Loading kg/day			
REPORTING Code	UNITS	PARAMETER	30 day	Daily	30 day	Daily	Meas. Freq.	Sample Type
50050	MGD	Flow	-	-	-	-	Daily	24 Hour Total
00310	mg/l	BOD_5	22	49	42	93	1/Week	Composite
00335	mg/l	COD	150	290	-	549	1/Week	Composite
00530	mg/l	Total Suspended Solids	20	40	38	76	1/Week	Composite
00515	mg/l	Total Dissolved ~~Chlor.~~ Solids	900	~~1560~~ 1500	1700	3000	1/Week	Composite
[illegible]	mg/l	[illegible] Chloride	-	~~0.5~~ 0.5	-	~~0.09~~ 0.9	2/Week	Grab
00010	°C	Temperature	-	-	-	-	1/Week	Max. Ind. Therm.
~~01051~~	~~ug/l~~	~~Total Lead~~	-	-	-	-	~~1/Month~~	~~Composite~~

2. The pH (Reporting Code 00400) shall not be less than 6.5 S.U. nor greater than 9.0 S.U. and shall be monitored daily by grab sample.

3. Samples taken in compliance with monitoring requirements specified above shall be taken at Sampling Stations described in Part II, OTHER REQUIREMENTS.

4. See PART II, OTHER REQUIREMENTS.

inter-office communication

to: FILE - General Tire Ashtabula date: 4/5/85

from: Bill Miller

subject: Vinyl Chloride Data

In the period Jan 1982 - Nov 1984, General Tire sampled & analyzed their total plant effluent for [redacted] times. Results were as follows:

50	readings	(33%)	over [redacted]
19	"	(9%)	" [redacted]
10	"	(7%)	" [redacted]
8	"	(5%)	" [redacted]

[redacted]

The highest reading was 4.85 mg/L on 4/22/82. See inside file folder of [redacted] 1984 MOR's for listing of all readings > 0.25 mg/L and date of occurence.

GEN 1001 (3/84)

Organic scans of the effluent detected only two organic compounds: 1,1, dichloro- ane and 1-(2 Butoxyethoxy)ethanol. However, presence of the first compound is ect due to a high presence found in the field blank.

Ames Test

The Ames test performed on SCM wastewater effluent proved to be negative.

c. [redacted] Rubber Company - Ashtabula, Ohio (Appendix, Attachment 15).

This General Tire facility manufactures a variety of polymers of vinyl chloride and a vinyl acetate-vinyl chloride copolymer.

NPDES COMPLIANCE

The sample results from this compliance inspection show General Tire to be achieving the limits contained in the NPDES permit. Self-monitoring data, however, indicates General Tire has had problems in the past meeting the limits contained in the permit. The company achieved all permit requirements in only two of twelve months in 1979. These records indicate that the plant has exceeded the BOD_5, COD, total suspended solids and total dissolved solids limits contained in the permit. During the survey, the loading of dissolved solids was found to be 2,418 lbs/day.

Based upon the data collected during this study a high concentration of zinc in the General Tire discharge increases the zinc level in Fields Brook above Ohio WQS for a Warmwater Habitat. Zinc is not limited in the NPDES permit and the discharger does not monitor this metal.

Toxicity Evaluation - Static Bioassays and Organic Chemical Analyses

The static fish bioassay results showed no toxicity to fish (fathead minnows), but 10% acute mortality to daphnia after a 48 hour exposure.

Eleven volatile and three non-volatile organics were found to be present in the General Tire discharge. These compounds and their reported concentrations are listed below.

Volatile Organics Detected
(3 grab samples)

1. chloroform (74 µg/l)
2. carbon tetrachloride (4.5 µg/l, 5.7 µg/l)
3. trans-1,3-dichloropropene (5.5 µg/l)
4. trichloroethylene (290 µg/l, 28 µg/l 19 µg/l)
5. 1,1,2,2-tetrachloroethane (1.0 µg/l)
6. tetrachloroethylene (3.4 µg/l, 1.7 µg/l)
7. toluene (5.6 µg/l, 0.5 µg/l, 4.0 µg/l)
8. chlorobenzene (4.0 µg/l)
9. 1-methoxy-1-propene (670 µg/l, 21 µg/l, 660 µg/l)
10. 1,1 oxybisethane (5.3 µg/l, 460 µg/l)
11. 1,1,2-trichloro-1,2,2 trifluoroethane (4.9 µg/l, 1.6 µg/l)

$C_2H_5 - O - C_2H_5$?

permit only limits : mono vinyl chloride + poly vinyl chloride

From 1982, David Barnes & Edward Easterling Summary Report - Ashtabula Area USEMR Environmental Services Division Westlake, Ohio.

R0084

Organic scans of the effluent detected only two organic compounds: 1,1, dichloroethane and 1-(2 Butoxyethoxy)ethanol. However, presence of the first compound is suspect due to a high presence found in the field blank.

Ames Test

The Ames test performed on SCM wastewater effluent proved to be negative.

c. General Tire & Rubber Company - Ashtabula, Ohio (Appendix, Attachment 13).

This General Tire facility manufactures a variety of polymers of vinyl chloride and a vinyl acetate-vinyl chloride copolymer.

NPDES COMPLIANCE

The sample results from this compliance inspection show General Tire to be achieving the limits contained in the NPDES permit. Self-monitoring data, however, indicates General Tire has had problems in the past meeting the limits contained in the permit. The company achieved all permit requirements in only two of twelve months in 1979. These records indicate that the plant has exceeded the BOD_5, COD, total suspended solids and total dissolved solids limits contained in the permit. During the survey, the loading of dissolved solids was found to be 2,418 lbs/day.

Based upon the data collected during this study a high concentration of zinc in the General Tire discharge increases the zinc level in Fields Brook above Ohio WQS for a Warmwater Habitat. Zinc is not limited in the NPDES permit and the discharger does not monitor this metal.

Toxicity Evaluation - Static Bioassays and Organic Chemical Analyses

The static fish bioassay results showed no toxicity to fish (fathead minnows), but 100% acute mortality to daphnia after a 48 hour exposure.

Eleven volatile and three non-volatile organics were found to be present in the General Tire discharge. These compounds and their reported concentrations are listed below.

Volatile Organics Detected
(3 grab samples)

1. chloroform (74 µg/l)
2. carbon tetrachloride (4.5 µg/l, 5.7 µg/l)
3. trans-1,3-dichloropropene (5.5 µg/l)
4. [redacted]
5. 1,1,2,2-tetrachloroethane (1.0 µg/l)
6. tetrachloroethylene (3.4 µg/l, 1.7 µg/l)
7. toluene (5.6 µg/l, 0.5 µg/l, 4.0 µg/l)
8. chlorobenzene (4.0 µg/l)
9. 1-methoxy-1-propene (670 µg/l, 21 µg/l, 660 µg/l)
10. 1,1 oxybisethane (5.3 µg/l, 460 µg/l)
11. 1,1,2-trichloro-1,2,2 trifluoroethane (4.9 µg/l, 1.6 µg/l)

industries surveyed, scans for organic pollutants revealed the discharge in trace amounts of similar contaminants found in the fish and sediments. The salient factor here may be the bioaccumulation of organics in fish resulting from a long term exposure to low level organic pollutants.

b. Other priority pollutants have been identified in Fields Brook sediments and/or fish that were not detected in the recent (1980) toxics sampling surveys at area industries. The priority pollutants found in more than trace amounts include:

- hexachloroethane
- hexachlorobenzene
- 1,2,4 - trichlorobenzene
- vinyl chloride
- 1,1 - dichloroethylene
- 1,1,1 - trichloroethane
- 1,1,2 - trichloroethane
- chlorobenzene

Vi[redacted] as well as chlorobenzene in the Olin Corporation discharge.

c. While not the subject of a sampling survey in 1980, Detrex Chemical Industries is a likely source of chlorinated organic contamination. Prior to 1972, Detrex manufactured chlorinated solvents, principally trichloroethylene and perchloroethylene. The plant used a series of lagoons for disposal of waste from their chlorinated solvents operation which have since been covered. Through seepage and runoff, chlorinated organics, such as trichloroethylene and similar compounds, are likely to be entering Fields Brook. Grab samples of Detrex discharges taken in association with a RCRA and Section 311 investigation showed the presence of trichloroethene. Trichloroethylene is a priority pollutant and was found in large concentrations in core samples of Fields Brook near State Street.

d. In the 1980 sediment survey, the highest concentration of zinc (3600 ug/g) was found at the mouth of tributary entering Fields Brook from the south along Route 11. This may reflect the discharge of RMI - Metals Reduction Plant. Based on the type of plant operation, significant organic contamination is not suspected. The organic data for sediments at this site show no appreciable organic contamination.

3. Impact on Groundwater

a. The soil types, groundwater characteristics, and potential for groundwater contamination vary widely within the Ashtabula Study area. As the potential for pollution of groundwater is extremely site specific, soils investigations are necessary to adequately determine the direction and extent of pollutant movement.

b. With respect to groundwater considerations, RCRA reconnaissance surveys identified Detrex Chemical Industries, International Minerals and Chemical Corporation (IMC), Reserve Environmental Services (RES), and Rockwell International - Brake Division as having the potential for the greatest impact on the subsurface water environment.

II. FINDINGS AND CONCLUSIONS

A. Ambient Environmental Problems

1. Contaminated Fish Flesh

a. Various studies over the years have shown that fish collected in the Ashtabula River and Fields Brook contain extremely complex bioaccumulative organic compounds. Relative to other fish sampled and analyzed in major United States watersheds, a 1976 study by ERL - Duluth showed the Ashtabula River fish to contain the greatest variety of chlorinated organics of all rivers studied. In addition to PCB's, 19 separate organochlorine compounds were identified in composite whole fish samples.

b. The bioaccumulative organics which have been detected in fish flesh analyses in the greatest concentrations include the following priority pollutants:

[redacted]

c. Other organics identified in significant amounts include other chlorinated benzenes and styrenes.

d. Notwithstanding variability in fish sampling and accumulation of organics among fish species, follow-up studies have substantiated the presence of significant amounts of bioaccumuable chlorinated organics in Ashtabula River and Fields Brook fish.

e. Additional studies are being conducted under a grant to the University of Wisconsin from the U.S. EPA ERL - Duluth to investigate variability of organic contamination within a fish population.

2. [redacted] Sediments

a. Ashtabula River and Fields Brook sediments have been sampled on several occasions - June and September of 1979, and September 1980. Both core and surface dredge samples have been obtained. Sediments are also contaminated with a variety of [redacted] as well as mercury, heavy metals, and other polychlorinated [redacted] concentrations.

b. A recent investigation (September 1980) focused primarily on Fields Brook and tributary sediments. With respect to metals, [redacted] zinc, mercury, lead and copper were identified in the greatest concentrations. The largest zinc concentration in the study (3600 µg/g) was found at the mouth of a tributary entering Fields Brook from the south near Route 11.

The two core samples (taken at Fields Brook near State Road and on the tributary entering Fields Brook from the north between State Road and Route 11) contained priority pollutants in significant quantities. These compounds included trichloro- [redacted] the [redacted] The dredge samples at the other sites also exhibited volatile pri[redacted] In this study, only one sample was found to contain PCB (Aroclor 1248).

INTERNAL ONLY

Toxics Summary Report
Ashtabula Problem Area

February 1981

David R. Barna
Donald F. Easterling

United States Environmental Protection Agency
Region V
Surveillance and Analysis Division
Eastern District Office
Westlake, Ohio

A Report on the Acute Toxicity of

Effluent from [redacted] Company Outfall 001

to Daphnia pulex

Report Number 81-193-NEDO

Biomonitoring Section

Ohio Environmental Protection Agency

In conjunction with a special study of Fields Brook and entities that discharge into it, grab samples were taken from a total of 16 sites for static screening bioassays. The intention of the study was to sample as many sites as possible in one day to determine if a toxicity problem existed at any site. It was practical to use only Daphnia pulex as the test organisms.

A grab sample of effluent from outfall 001 of the General Tire and Rubber Company was collected and used in a 48-hour static screening bioassay with D. pulex as the test organism. Details of the test may be found on the attached bioassay report form. [redacted] Thirty percent of the daphnids exposed to the effluent were rendered immotile during the test.

These screening bioassays were utilized to determine if an effluent was acutely toxic to the test organism and indicate if additional screening bioassays using D. pulex and the fathead minnow, Pimephales promelas, should be conducted. Based upon the results of this screening bioassay further screening bioassays involving both D. pulex and P. promelas should be conducted.

addition, three special tests were performed at this facility in order to check for the presence of any toxic pollutants in the company discharge. These tests included two static bioassay tests, scans for organic pollutants, and the Ames test.

5. Summary of Findings and Conclusions

a. The sample results from this compliance inspection show General Tire to be achieving the limits contained in the NPDES permit. Self-monitoring data, however, indicates General Tire has had problems in the past meeting the limits contained in the permit. The company achieved all permit requirements in only two of twelve months in 1979. These records indicate that the plant has exceeded the BOD_5, COD, total suspended solids and total dissolved solids limits contained in the permit.

b. The Company was found to be doing the dissolved solids analysis incorrectly. A drying temperature of 105°C was being used instead of the 180°C specified in standard EPA methods. The Ohio EPA mistakenly told the company to use the incorrect temperature. The company was informed during this inspection that the correct drying temperature is 180°C.

c. Based upon the data collected during this study a high concentration of zinc in the General Tire discharge increases the zinc level in Fields Brook above Ohio WQS for a Warmwater Habitat. Zinc is not limited in the NPDES permit and the discharger does not monitor this metal.

d. Eleven volatile and three non-volatile organics were found to be present in the General Tire discharge. These compounds and their reported concentrations are listed below.

Volatile Organics Detected
(3 grab samples)

1. chloroform (74 µg/l)
2. carbon tetrachloride (4.5 µg/l, 5.7 µg/l)
3. trans-1,3-dichloropropene (5.5 µg/l)
4. trichloroethylene (290 µg/l, 28 µg/l, 19 µg/l)
5. 1,1,2,2-tetrachloroethane (1.0 µg/l)
6. tetrachloroethylene (3.4 µg/l, 1.7 µg/l)
7. toluene (5.6 µg/l, 0.5 µg/l, 4.0 µg/l)
8. chlorobenzene (4.0 µg/l)
9. 1-methoxy-1-propene (670 µg/l, 21 µg/l, 660 µg/l)
10. 1,1 oxybisethane (5.3 µg/l, 460 µg/l)
11. 1,1,2-trichloro-1,2,2 trifluoroethane (4.9 µg/l, 1.6 µg/l)

Non-Volatile Organics Detected
(one 24-hour composite sample)

1. Bis(2-ethylhexyl)phthalate (2.4 µg/l)
2. phenanthrene (0.5 µg/l)
3. anthracene (0.5 µg/l)

The first eight volatile organics listed and all three non-volatile organic compounds are priority pollutants.

e. The Ames Test performed on the General Tire effluent sample proved to be negative. That is the effluent did not induce a mutagenic/carcinogenic response in the test bacteria.

(Continued)

Volatile Organic Analysis of Effluent from
General Tire Corporation, Ashtabula - January 22-23, 1980
(3 grab samples)

Date/Time of Collection	1-22-80/0950	1-22-80/2215	1-23-80/0915	
	Sample Number and Concentration (ppb)			
	VOA #1 EDO473 80-EM04S04	VOA #2 EDO473 80-EM04S05	VOA #3 EDO473 80-EM04S06	Reagent Blank EDO473 80-EM04R07
Compounds Detected				
1,1-Dichloroethane	<1.1	<1.1	<1.1	11.8
1,2-Dichloroethylene	<1.1	<1.1	<1.1	<1.1
Chloroform	[illegible]	[illegible]	[illegible]	<1.5
1,2-Dichloroethane	<1.1	<1.1	<1.1	<1.1
1,1,1-Trichloroethane	<1.7	<1.7	<1.7	<1.7
Carbon Tetrachloride	4.5	5.7	<1.8	<1.8
Bromodichloromethane	<3.8	<3.8	<3.8	<3.8
1-Bromo-2-Chloroethane	<4.6	<4.6	<4.6	<4.6
1,2-Dichloropropane	<0.7	<0.7	<0.7	<0.7
Trans-1,3-Dichloropropene	<1.7	<1.1	5.5	<0.7
Benzene	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	[illegible]	[illegible]	[illegible]	<6.0
Chlorodibromomethane	<1.5	<1.5	<1.5	<1.5
1,1,2, Trichloroethane	<1.5	<1.5	<1.5	<1.5
Cis-1,3-Dichloropropene	<1.5	<1.5	<1.5	<1.5
Bromoform	<1.4	<1.4	<1.4	<1.4
1,1,2,2-Tetrachloroethane	1.0	<1.0	<1.0	<1.0
Tetrachloroethylene	[illegible]	[illegible]	[illegible]	<0.5
Toluene	5.6	0.5	4.0	5.0
Chlorobenzene	<0.5	[illegible]	<0.5	<0.5
1-methoxy-1-propene*	670	21	660	<0.5
1,1 Oxybisethane*	5.3	460	<0.1	<0.5
1,1,2-Trichloro - 1,2,2-Trifluoroethane*	4.9	1.6	<0.1	<0.5

from General Tire Corporation, Ashtabula - January 22-23, 1980 (Continued)
(One 24-hour Composited Sample)

Date Collection Time Period	1/22-23/80 0945-0915
	Sample Number and Concentration (ppb)
	EDO473
Compounds Detected	80-EM104S01
1,2-Dichlorobenzene	<0.1
1,4-Dichlorobenzene	<0.1
Trichlorobenzene	<0.1
Naphthalene	<0.1
Diethyl Phthalate	<0.1
Fluoranthene	<0.2
Pyrene	<0.2
[redacted]	[redacted]
Isophorone	<0.7
Phenanthrene	0.5
Anthracene	0.5
1-(2-Butoxyethoxy)ethanol*	<0.1
Tetrachlorobenzenene	<0.1
Dimethyl Naphthalene*	<0.1
Phenol*	<0.1
Benzonitrile*	<0.1
1-Methyl-4-Ethenyl Benzene*	<0.1
Phenyl Ethanone*	<0.1
Methyl Phenol*	<0.1
Dimethyl Phenol*	<0.1
1,1-2-ethyl biphenyl*	<0.1
Unknown Silyl Compounds*	<0.1
Di-n-Butyl Phthalate*	<0.1
Total Allphatic Hydrocarbons*	<0.1
Other Unidentified Compounds	<0.1

[redacted]

U.S. Environmental Protection Agency
Region V
Surveillance & Analysis Division
Eastern District Office

Compliance Monitoring Field Report

1. Permittee Identification

[redacted] Company
Middle Road P.O. Box 68
Ashtabula, Ohio 44004
(216) 998-1120

Corporate Office:

The General Tire & Rubber Company
1 General Street
Akron, Ohio 44309
(216) 798-3000

NPDES Permit: OH 0002283

Receiving Stream: Fields Brook to Ashtabula River

Responsible Official:

Gerald E. Brumbaugh
Technical Superintendent, Ashtabula Plant

2. Dates of Inspection and Survey: January 22-23, 1980

3. Participants

Permittee

Gerald E. Brumbaugh, Technical Superintendent

Ohio EPA

Melinda Becker, Environmental Scientist
Mark Baumgardner, Environmental Scientist

U.S. EPA

Mark Moloney, Environmental Engineer, Author
Charles Beier, Engineering Technician
Joseph Good, General Mechanic
Philip Gehring, Chief, Field Section
Roland Hartranft, Engineering Technician

4. Objective

This compliance sampling inspection was conducted pursuant to a December 19, 1979 Enforcement Division request. The purpose of this study was to verify compliance with NPDES permit OH 0002283 and applicable stream standards. In

Organic scans of the effluent detected only two organic compounds: 1,1, dichloroethane and 1-(2 Butoxyethoxy)ethanol. However, presence of the first compound is suspect due to a high presence found in the field blank.

Ames Test

The Ames test performed on SCM wastewater effluent proved to be negative.

[redacted] General Tire & Rubber Company - Ashtabula, Ohio (Appendix, Attach-

This General Tire facility manufactures a variety of polymers of vinyl chloride and a vinyl acetate-vinyl chloride copolymer.

NPDES COMPLIANCE

The sample results from this compliance inspection show General Tire to be achieving the limits contained in the NPDES permit. Self-monitoring data, however, indicates General Tire has had problems in the past meeting the limits contained in the permit. The company achieved all permit requirements in only two of twelve months in 1979. These records indicate that the plant has exceeded the BOD_5, COD, total suspended solids and total dissolved solids limits contained in the permit. During the survey, the loading of dissolved solids was found to be 2,418 lbs/day.

Based upon the data collected during this study a high concentration of zinc in the General Tire discharge increases the zinc level in Fields Brook above Ohio WQS for a Warmwater Habitat. Zinc is not limited in the NPDES permit and the discharger does not monitor this metal.

Toxicity Evaluation - Static Bioassays and Organic Chemical Analyses

The static fish bioassay results showed no toxicity to fish (fathead minnows), but 100% acute mortality to daphnia after a 48 hour exposure.

Eleven volatile and three non-volatile organics were found to be present in the General Tire discharge. These compounds and their reported concentrations are listed below.

Volatile Organics Detected
(3 grab samples)

1. [redacted]
2. carbon tetrachloride (4.5 µg/l, 5.7 µg/l)
3. trans-1,3-dichloropropene (5.5 µg/l)
4. [redacted]
5. [redacted]
6. [redacted]
7. toluene (5.6 µg/l, 6.9 µg/l, 4.0 µg/l)
8. [redacted]
9. 1-methoxy-1-propene (570 µg/l, 21 µg/l, 660 µg/l)
10. 1,1 oxybisethane (5.3 µg/l, 460 µg/l)
11. 1,1,2-trichloro-1,2,2 trifluoroethane (4.9 µg/l, 1.6 µg/l)

industries surveyed, scans for organic pollutants revealed the discharge in trace amounts of similar contaminants found in the fish and sediments. The salient factor here may be the bioaccumulation of organics in fish resulting from a long term exposure to low level organic pollutants.

b. Other priority pollutants have been identified in Fields Brook sediments and/or fish that were not detected in the recent (1980) toxics sampling surveys at area industries. The priority pollutants found in more than trace amounts include:

- hexachloroethane
- [redacted]
- 1,2,4 - trichlorobenzene
- [redacted]
- 1,1 - dichloroethylene
- 1,1,1 - trichloroethane
- 1,1,2 - trichloroethane
- [redacted]

Vinyl [redacted] effluent of General Tire in past surveys as well as chlorobenzene in the Olin Corporation discharge.

c. While not the subject of a sampling survey in 1980, potential Detrex Chemical Industries is a ~~likely~~ source of chlorinated organic contamination. Prior to 1972, Detrex manufactured chlorinated solvents, principally trichloroethylene and perchloroethylene. The plant used a series of lagoons for disposal of waste from their chlorinated solvents operation which have since been covered. Through seepage and runoff, chlorinated organics, such as trichloroethylene and similar compounds, may ~~are likely to~~ be entering Fields Brook. Grab samples of Detrex discharges taken in association with a RCRA and Section 311 investigation showed the presence of trichloroethene. Trichloroethylene is a priority pollutant and was found in large concentrations in core samples of Fields Brook near State Street.

(3) and

d. In the 1980 sediment survey, the highest concentration of zinc (3600 µg/g) was found at the mouth of tributary entering Fields Brook from the south along Route 11. This may reflect the discharge of RMI - Metals Reduction Plant. Based on the type of plant operation, significant organic contamination is not suspected. The organic data for sediments at this site show no appreciable organic contamination.

Add e.

3. Impact on Groundwater

a. The soil types, groundwater characteristics, and potential for groundwater contamination vary widely within the Ashtabula Study area. As the potential for pollution of groundwater is extremely site specific, soils investigations are necessary to adequately determine the direction and extent of pollutant movement.

b. With respect to groundwater considerations, RCRA reconnaissance surveys and other inspections identified Detrex Chemical Industries, International Minerals and Chemical Corporation (IMC), Reserve Environmental Services (RES), and Rockwell International - Brake Division as having the potential for the greatest impact on the subsurface water environment.

Union Carbide

COPY

Toxics Summary Report
Ashtabula Problem Area

REVISED
~~February 1981~~
APRIL 1982

David R. Barna
Donald F. Easterling

United States Environmental Protection Agency
Region V
~~Environmental Surveillance and Services~~ Division
Eastern District Office
Westlake, Ohio

SOLID WASTES GENERATED AT GENERAL TIRE & RUBBER PVC PLANT -- TABULA, OHIO

TABLE

Description of Waste Materials Generated	Volume of Waste Lbs./mo. (app.)	Description of Current On-Site Storage or Disposal Practice	Ultimate Disposal Site and Hauler
[redacted] that cannot be re-used	[redacted]	[redacted] (per EPA VCM Emission Standards)	--
Sl[redacted] Pond - includes Polyvinyl-chloride (PVC) resin and PVC Vinyl Acetate Copolymer resin and salts from waste treatment	[redacted]	Solids accumulate primarily in the first of 3 settling ponds. The #1 Pond is cleaned 3-4 times a year and the sludge hauled by and to an OEPA approved waste treatment facility	Environmental Servi[redacted] 5841 Woodman Ave., Ashtabula, Ohio 4400[redacted] Site location -- Middle Road, Ashtabula, Ohio
Normal household trash -- paper, garbage, wood, etc.	8,000	Stored in trailer that is removed weekly for disposal at OEPA approved landfill	Hauler-Klein Trucking Co. 5030 S. Ridge East, Ashtabula, Ohio 4400[redacted] Site location-- Doherty Sanitary Landfill, Tuttle Rd. Geneva, Ohio 44041
Used Oil	870	Recyled on premises by burning in boilers during the year. Stored in 55 gal. drums	--

U.S. Environmental Protection Agency
Region V
Surveillance & Analysis Division
Eastern District Office

Compliance Monitoring Field Report

1. Permittee Identification

General Tire & Rubber Company
Middle Road P.O. Box 68
Ashtabula, Ohio 44004
(216) 998-1120

Corporate Office:

The General Tire & Rubber Company
1 General Street
Akron, Ohio 44309
(216) 798-3000

NPDES Permit: OH 0002283

Receiving Stream: Fields Brook to Ashtabula River

Responsible Official:

Gerald E. Brumbaugh
Technical Superintendent, Ashtabula Plant

2. Dates of Inspection and Survey: January 22-23, 1980

3. Participants

Permittee

Gerald E. Brumbaugh, Technical Superintendent

Ohio EPA

Melinda Becker, Environmental Scientist
Mark Baumgardner, Environmental Scientist

U.S. EPA

Mark Moloney, Environmental Engineer, Author
Charles Beier, Engineering Technician
Joseph Good, General Mechanic
Philip Gehring, Chief, Field Section
Roland Hartranft, Engineering Technician

4. Objective

This compliance sampling inspection was conducted pursuant to a December 19, 1979 Enforcement Division request. The purpose of this study was to verify compliance with NPDES permit OH 0002283 and applicable stream standards. In

addition, three special tests were performed at this facility in order to check for the presence of any toxic pollutants in the company discharge. These tests included two static bioassay tests, scans for organic pollutants, and the Ames test.

5. Summary of Findings and Conclusions

a. The sample results from this compliance inspection show General Tire to be achieving the limits contained in the NPDES permit. Self-monitoring data, however, indicates General Tire has had problems in the past meeting the limits contained in the permit. The company achieved all permit requirements in only two of twelve months in 1979. These records indicate that the plant has exceeded the BOD_5, COD, total suspended solids and total dissolved solids limits contained in the permit.

b. The Company was found to be doing the dissolved solids analysis incorrectly. A drying temperature of 105°C was being used instead of the 180°C specified in standard EPA methods. The Ohio EPA mistakenly told the company to use the incorrect temperature. The company was informed during this inspection that the correct drying temperature is 180°C.

c. Based upon the data collected during this study a high concentration of zinc in the General Tire discharge increases the zinc level in Fields Brook above Ohio WQS for a Warmwater Habitat. Zinc is not limited in the NPDES permit and the discharger does not monitor this metal.

d. Eleven volatile and three non-volatile organics were found to be present in the General Tire discharge. These compounds and their reported concentrations are listed below.

Volatile Organics Detected
(3 grab samples)

1. [redacted]
2. carbon tetrachloride (4.5 µg/l, 5.7 µg/l)
3. trans-1,3-dichloropropene (5.5 µg/l)
4. [redacted] 28 µg/l, 19 µg/l)
5. [redacted]
6. [redacted] (3.6 µg/l, 4.7 µg/l)
7. toluene (5.6 µg/l, 0.5 µg/l, 4.0 µg/l)
8. [redacted] (4.0 µg/l)
9. 1-methoxy-1-propene (670 µg/l, 21 µg/l, 660 µg/l)
10. 1,1 oxybisethane (5.3 µg/l, 460 µg/l)
11. 1,1,2-trichloro-1,2,2 trifluoroethane (4.9 µg/l, 1.6 µg/l)

Non-Volatile Organics Detected
(one 24-hour composite sample)

1. Bis(2-ethylhexyl)phthalate (2.4 µg/l)
2. phenanthrene (0.5 µg/l)
3. anthracene (0.5 µg/l)

The first eight volatile organics listed and all three non-volatile organic compounds are priority pollutants.

e. The Ames Test performed on the General Tire effluent sample proved to be negative. That is the effluent did not induce a mutagenic/carcinogenic response in the test bacteria.

r Company
)002283)

U.S. ENVIRONMENTAL PROTECTION AGEN
REGION V
Eastern District Office

(Continued)

Sample Type: 8 C-8 hour flow proportioned co osite
24C-24 hour flow proportioned co ite
EVC-Equal Volume Composite
G-Grab

r	Outfall 001			Upstream			Downstream			NPDES Permit Limits		
	PPM	NET lbs/day	GROSS lbs/day	PPM	NET lbs/day	GROSS lbs/day	PPM	NET lbs/day	GROSS lbs/day	PPM	NET lbs/day	GROSS lbs/day
	0.666			1.740			1.930					
	0.061			0.188			0.185					
	<0.010			<0.010			<0.010					
	<0.030			<0.030			<0.030					
	<0.030			<0.030			<0.030					
	<0.030			<0.030			<0.030					
	0.008			0.026			0.031					
	<0.005			0.014			0.016					
	<0.005			<0.005			<0.005					
	0.171			<0.050			0.114					

Attachment 4

ıer Compan
0002283)

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION V
Eastern District Office

Sample Type: 8 C-8 hour flow proportioned [illegible]osite
24C-24 hour flow proportioned co[illegible]site
EVC-Equal Volume Composite
G-Grab

PARAMETER	Upstream			Downstream			NPDES Permit Limits		
	G 1/23/80 1055			G 1/23/80 1005					
	4.29* 2.0 7.3 --			3.73 5.0 7.6 --			6-9		
	PPM	NET lbs/day	GROSS lbs/day	PPM	NET lbs/day	GROSS lbs/day	PPM	NET lbs/day	GROSS lbs/day
Iron	10.1			9.9					
Manganese	3300			2800					
Molybdenum									
Nickel	7.6			7.3					
Lead	4393			4016					
Tin	2513			2519					
Titanium	2474			2214			1570		5512
Vanadium	10			14			40		148
Yttrium	2			2			33		120
Zinc	530			7150					
	0.006			0.014					
	0.76			0.78					
	55			38			290		849
	0.0002			0.0004					
	1150			985					
	30.1			52.8					
	6.9			8.1					
	713			641					
	<0.003			<0.003					
	0.385			0.583					
	0.144			0.154					
	0.026			0.025					
	<0.001			<0.001					
	<0.002			<0.002					
	<0.005			<0.005					
	<0.005			0.007					
	0.008			0.015					

* Flow believed to be in error.

Discharger: General Tire and
Ashtabula, Ohio
Sample Date: January 22-23, 1
In
Ashc

General Tire & Rubber Company
Middle Road
Ashtabula, Ohio 44004

OHD 004-162-343
Ohio EPA - August 2, 1985

The General Tire & Rubber Company (GTR) is located on Middle Road in the City of Ashtabula, Ashtabula County, Ohio. GTR is located in an industrial area that is one of the largest and most diversified concentrations of chemical plants in Ohio. GTR is bordered on the east by Olin Corporation. GTR operated a polyvinyl chloride (PVC) producing plant from 1953 to 1984, when it closed the operation.

The manufacture of PVC involves the reaction between vinyl chloride (VC) monomer and various regents in a suspension polymerization system. The finished product, PVC, was dried, stored in silos, and then sold. Wastewater generated by this process was passed through a neutralization pit and then into a series of five ponds. The first was a settling pond, while the other four were aeration ponds. After a retention period in the ponds, the treated water would be released via GTR NPDES outfall 001 into Fields Brook. Three or four time a year pond #1 was dredged, and the resultant sludge hauled to an off-site waste treatment facility. Wastes from other processes would be incinerated or recycled on-site or shipped off-site to landfills.

GTR held a RCRA Permit, but in 1981 RCRA status was no longer necessary as the facility became a small quantity waste generator.

Prior to 1975, GTR had a manually-assisted method for cleaning out their VC reactor vessels. In August of 1975, because of the potential for worker exposure to possibly harmful levels of vinyl chloride, and to comply with OSHA regulations. GTR instituted a program of automated solvent clean-out. Prior to the installation of this new system, GTR never had an NPDES.COD violation.

The following violations were noted by periodic inspections of the GTR facility by both State and Federal EPA representatives. [redacted] Housekeeping violations were noted on more than one occasion. Samples taken at GTR outfall 001 indicated the presence of priority pollutants not thought to be generated at that facility; and, therefore, not covered under GTR's NPDES Permit. Of these pollutants, only zinc was above the State Water Quality Standards.

In late 1984, GTR shut down operations at its Ashtabula facility and it is presently up for sale.

Due to current plant closure, and the Fields Brook NPL project, it is recommended that this site be given a low priority for FIT activities and a medium priority for State actions.

General Tire & Rubber Company
Middle Road
Ashtabula, Ohio 44004

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Ohio EPA - August 2, 1985

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SOLID WASTES GENERATED AT GENERAL TIRE & RUBBER
PVC PLANT -- ASHTABULA, OHIO

TABLE I

Description of Waste Materials Generated	Volume of Waste Lbs./mo. (app.)	Description of Current On-Site Storage or Disposal Practice	Ultimate Disposal Site and Hauler
1. Vinyl Chloride Monomer (VCM) that cannot be re-used	125,000	Controlled discharge to Effluent (per EPA VCM Emission Standards)	--
2. Sludge from Waste Effluent Pond - includes Polyvinyl-chloride (PVC) resin and PVC Vinyl Acetate Copolymer resin and salts from waste treatment	160,000	Solids accumulate primarily in the first of 3 settling ponds. The #1 Pond is cleaned 3-4 times a year and the sludge hauled by and to an OEPA approved waste treatment facility	Inc. Environmental Services 5841 Woodman Ave., Ashtabula, Ohio 44004 Site location -- Middle Road, Ashtabula, Ohio
3. Normal household trash -- paper, garbage, wood, etc.	8,000	Stored in trailer that is removed weekly for disposal at OEPA approved landfill	Co. Hauler-Niciu Trucking 5030 S. Ridge East, Ashtabula, Ohio 44004 Site location-- Doherty Sanitary Landfill, Tuttle Rd. Geneva, Ohio 44041
4. Used Oil	870	Recyled on premises by burning in boilers during the year. Stored in 55 gal. drums	--

6 36732

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SOLID WASTES GENERATED AT GENERAL TIRE & RUBBER PVC PLANT -- ASHTABULA, OHIO

TABLE I

Description of Waste Materials Generated	Volume of Waste Lbs./mo. (app.)	Description of Current On-Site Storage or Disposal Practice	Ultimate Disposal Site and Hauler
1. [redacted] that cannot be re-used	[redacted]	Con[redacted] (per EPA VCM Emission Standards)	--
2. Sludge from Waste Effluent Pond - includes Polyvinyl-chloride (PVC) resin and PVC Vinyl Acetate Copolymer resin and salts from waste treatment	160,000	Solids accumulate primarily in the first of 3 settling ponds. The #1 Pond is cleaned 3-4 times a year and the sludge hauled by and to an OEPA approved waste treatment facility	Inc. Environmental Services 5841 Woodman Ave., Ashtabula, Ohio 44004 Site location -- Middle Road, Ashtabula, Ohio
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GENERAL TIRE

GTR CHEMICAL COMPANY

P.O. BOX 68 • ASHTABULA, OHIO 44004
PHONE: (216) 998-1120

September 12, 1979

State of Ohio
Environmental Protection Agency
Northeast District Office
Office of Land Pollution Control
2110 E. Aurora Road
Twinsburg, Ohio 44087

Attention: Deborah J. Berg

Dear Ms. Berg:

In reply to your letter of April 16, 1979, the solid waste inventory you requested from our facility is attached.

If we can be of any further service call 216-998-1120 Extension 219.

Sincerely,

G. E. Brumbaugh

G. E. Brumbaugh
Technical Superintendent

GEB:sm

cc: A. D. Jeffrey
R. W. Laundrie
H. E. Jewett

GENERAL TIRE

GTR CHEMICAL COMPANY

P.O. BOX 68 • ASHTABULA, OHIO 44004
PHONE: (216) 998-1120

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G. E. Brumbaugh

G. E. Brumbaugh
Technical Superintendent

GEB:sm

cc: A. D. Jeffrey
R. W. Laundrie
H. E. Jewett

030731

128

GENERAL TIRE

GTR CHEMICAL COMPANY

P.O. BOX 68 • ASHTABULA, OHIO 44004

PHONE: (216) 998-1120

November 6, 1981

Mr. Dennis Bush
Ohio EPA
Northeast District
2110 East Aurora Rd.
Twinsburg, Ohio 44087

Dear Mr. Bush:

Attached is GTR Chemical Company's [redacted] burning waste solvents in our No. 2 [redacted], a [redacted]

It is our understanding from telephone conversations with you that we need only to obtain the permit to install to begin burning our waste solvents in the boiler, and that it is not necessary at this time to re-apply for a permit to operate for burning waste solvents in this boiler.

It is our intention to begin burning the waste solvents as soon as we receive our permit to install. If you need any further information, please contact C. E. Reynolds.

Respectfully submitted,

C E Reynolds

C. E. Reynolds
Sr. Process Engineer

CER:sm
attach.

cc: H. Graff
R. L. Jackson
R. W. Laundrie
A. D. Jeffrey
H. E. Jewett

PAID
Amount $15.00 Date 12/7/81
Check # 3136 Date 12/4/81

RECEIVED
NOV 27 1981
OHIO ENVIRONMENTAL PROTECTION AGENCY
N. E. D. O.

GENERAL TIRE & RUBBER CO

060700

128

INTER-OFFICE COMMUNICATION

TO Candy Hatch - Air Pollution Control DATE January 27, 1982

FROM: Chris Frazier - HMM

SUBJECT: General Tire - Astabula Plant request to burn spent solvents.

Legitimate reuse of listed hazardous waste (~~i.e. cyclohexanone, acetone, and carbon disulfide~~) is exempt from hazardous waste regulations as per OAC 3745-51-06. General Tire's proposal to burn wastes in their boiler does appear to be legitimate reuse. No hazardous waste permit modifications are necessary so no further action will be taken by the Division of Hazardous Materials Management.

CF:km

FORM GEN 1001

060699

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION V
AIR MANAGEMENT DIVISION

P. 2 OF 2

TELEPHONE MEMO

TO: HENRY GRAFF

FROM: BRUCE VARNER

DATE: 11/16/82

SUBJECT: GENERAL TIRE, ASHTABULA, OHIO
9/8/82 RELIEF VALVE DISCHARGE

TIME: 3:15 pm

SUMMARY: THE BACKUP SHORTSTOP SYSTEM WILL ALSO USE LIQUID ALPHAMETHYL STYRENE (AMS). BACKUP WASN'T USED BEFORE BECAUSE GRAFF CANNOT RECALL FAILURE OF SHORTSTOP SYSTEM CONTRIBUTING TO ANY OTHER RELIEF VALVE DISCHARGE (OUR RECORDS UNFIRM THIS). HE THINKS THE BACKUP SYSTEM MAY BE INSTALLED BY THE END OF 1982, BUT THERE IS NO FIRM COMMITMENT FOR THIS.

WE DISCUSSED THE CALCULATIONS ESTIMATING THE VINYL CHLORIDE [redacted] AT THE END OF A BATCH, 9500 LBS OF THE 10,750 LBS CHARGED IS CONVERTED TO PVC, FOR A CONVERSION OF (9500/10,750)(100%) = 88%. BATCH #1217 HAD REACTED FOR 3.8 HR AT THE TIME OF THE DISCHARGE, SO 11-3.8 = 7.2 HRS OF CONVERSION REMAINED. THEREFORE, THE MONOMER VINYL CHLORIDE (MVC) AT THE DISCHARGE WAS (7.2/11)(9500 + TWO LBS PLUS) THE EXTRA MVC THAT DOES NOT GET CONVERTED, WHICH IS 10,750 - 9500 = 1250 LBS, FOR A TOTAL OF 9440 + 1250 = [redacted] LBS. GRAFF ADMITTED HE ERRED BY NOT ADDING BACK THE 1250 LBS. THE CONTENT IN THE REACTORS REPRESENTS MVC RECOVERED, AND WAS MEASURED BY DROPPING THE REACTORS TO A STRIPPER AND OBSERVING THE DIFFERENCE IN SLURRY LEVEL. IT IS ASSUMED THAT ALL THE MVC HAD REACTED, AS AT LEAST 2 HOURS PASSED BEFORE THE MEASUREMENT, AND REACTION PROCEEDS QUICKLY WHEN OUT OF CONTACT. NO VINYL CHLORIDE ESCAPED FROM THE REACTORS TO WHICH THE BATCH WAS VENTED, OR FROM THE STRIPPER, HENCE, 3700 LBS IS A MINIMUM ESTIMATE FOR RECOVERY AS IT DOES NOT INCLUDE UNREACTED VINYL CHLORIDE IN THE STRIPPER. ASSUMING 3700 LBS IS CORRECT, THE DISCHARGE IS THEN 8690 - 3700 = 4990 LBS, A WORST CASE ESTIMATE.

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION V
AIR MANAGEMENT DIVISION

TELEPHONE MEMO

TO: HENRY GRAFF 8-216-998-1120

FROM: BRUCE VARNER DATE: 11/16/82

SUBJECT: GENERAL TIRE, ASHTABULA, OHIO TIME: 3 15 PM
9/8/82 RELIEF VALVE DISCHARGE

SUMMARY: SHORTSTOP MUST BE FLUSHED INTO THE REACTOR BY WATER AT 200 PSI, AS REACTOR IS UNDER PRESSURE. THIS IS TRUE FOR THE BACKUP ISOPRENE AS WELL, WHICH IS MENTIONED IN PLANT PROCEDURE NO. 3.1.20.0 ATTACHED TO A 6/25/82 NOTE FROM GRAFF TO RICH RUTH. THE WATER IS PUMPED TO A MAIN TANK THAT IS EQUIPPED WITH A "TOILET TANK" TYPE FLOAT SYSTEM THAT SENSES WHEN WATER IS NEEDED AND CALLS FOR A VALVE TO OPEN TO REFILL THE TANK. THE MALFUNCTION WAS DUE TO THE FAILURE OF THIS VALVE TO OPEN AND REFILL THE TANK, SO NO WATER WAS AVAILABLE TO BE PUMPED TO THE REACTOR. THE VALVE HAS BEEN REPLACED. GRAFF DID NOT KNOW WHY IT FAILED TO OPEN.

THE PLANT NORMALLY OPERATES WITH CHILLED WATER COOLING TO THE REACTORS IN THE SUMMER AND COOLING TOWER WATER THE REST OF THE YEAR. HOWEVER, CHILLED WATER WAS NOT USED THIS PAST SUMMER BECAUSE PLANT WAS OPERATING AT A REDUCED PRODUCTION LEVEL. GRAFF THINKS 9/8 MAY HAVE BEEN A HOT DAY AND HUMID, REDUCING COOLING CAPACITY OF THE COOLING TOWER, ANOTHER BATCH WENT OUT OF CONTROL IN ADDITION TO #6217, AT ABOUT THE SAME TIME. IT WAS RELIEVED TO THE GASHOLDER THROUGH RELIEF VALVES ON THE REACTOR, AND THAT IS WHY GASHOLDER WAS FULL. THE GASHOLDER IS DESIGNED TO HOLD ONLY ONE BATCH. IT HOLDS 10,000 LBS, OR ABOUT 45,000 FT^3. IF A BATCH GOES OUT OF CONTROL AT THE START, THEY ADD SHORTSTOP. HOWEVER, IF IT IS NEAR THE END, THEY DUMP IT TO OTHER REACTORS OR STRIPPERS TO SAVE THE PRODUCT. VENTING TO OTHER REACTORS, AS WAS DONE WITH BATCH #6217, IS DONE THROUGH THE <u>BOTTOM</u> OF THE OUT-OF-CONTROL REACTOR, SO SLURRY IS CARRIED OVER TO OTHER REACTORS. WHILE REACTORS RELIEVE TO GASHOLDER, STRIPPERS RELIEVE TO ATMOSPHERE. GRAFF THINKS STRIPPERS WERE FULL AT THE TIME, SO WERE UNAVAILABLE. THE GASHOLDER GRADUALLY EMPTIES THROUGH THE PLANT RECOVERY SYSTEM.

GTR CHEMICAL COMPANY
P.O. BOX 68 • ASHTABULA, OHIO 44004
PHONE: (216) 998-1120

September 16, 1982

Mr. Larry Kertcher, Chief
Air Compliance Branch
Air Management Division
U.S.E.P.A., Region V.
230 South Dearborn Street
Chicago, Illinois 60604

Dear Mr. Kertcher:

In accordance with the National Emission Standard for Vinyl Chloride, the Ashtabula facility is reporting a relief valve discharge.

On September 8, 1982, at approximately 1850 hours, there was a discharge from Reactor R-314, batch #6217. The batch was charged at 1500 hours and was at run temperature for about one hour, when the temperature and pressure started to increase. Efforts were made to charge a short-stop agent, alphamethyl styrene, but there was a malfunction in the high-pressure water system. This system is used to flush the short-stop into the reactor.

Since the gasholder was full, and the batch could not be dropped to a stripper tank, it was vented to three other reactors. This was not sufficient to relieve the pressure and there was a discharge from the relief valve.

Plans are to construct a back-up system to shortstop reactors, consisting of a pressure vessel and nitrogen on a portable cart.

The loss is estimated as follows:

MVC Charged	10,750 lbs.
PVC @ normal conversion	9,500 lbs.
Normal reaction time	11 hrs.
MVC @ discharge	7,440 lbs.
(7.2 hr. ÷ 11 hr. X 9,500)	
Estimated change in reactors	[redacted]
MVC lost to atmosphere	
(7,440 - 3,700)	

Sincerely,

GTR CHEMICAL COMPANY

H. Graff
Technical Superintendent

THE GENERAL TIRE & RUBBER COMPANY
Chemical/Plastics Division

080085

THE GENERAL TIRE & RUBBER COMPANY
CHEMICAL / PLASTICS DIVISION, P. O. BOX 68 • ASHTABULA, OHIO 44004

December 3, 1976

Regional Administrator Region V
U. S. Environmental Protection Agency
230 Dearborn
Chicago, Illinois 60607

Dear Sir:

(a) Source Report

(1) The General Tire & Rubber Company
Chemical Division
P. O. Box 68, Middle Road
Ashtabula, Ohio 44004

(2) The location of the plant is on Middle Road, Ashtabula Township, 0.4 miles east of State Road, on Middle Road.

(3) Vinyl Chloride

[redacted]

The Vinyl Chloride monomer is received at The General Tire PVC Plant in Ashtabula, Ohio, in 30,000-gallon tank cars. Four of these 30,000-gallon tank cars can be spotted at the unloading site at one time. The monomer is unloaded by an unloading positive displacement pump to four 13,000-gallon storage tanks. It is next pumped through filters to one 15,000-gallon storage tank for transfer to polymer building for charging. Typical Poly Kettle Cycle - A clean poly kettle which has been pressure tested hydrostatically with water is charged with water, monomer, and a catalyst. After polymerization is complete, the batch is dropped to the stripper; the poly kettle is not opened, but is flushed with high-pressure water to rinse any residual resin from the poly kettle. The poly kettle is then charged with the second batch of a series. The number of charges between openings of the poly kettle for cleaning varies from three to six charges. To open the poly kettle, it is filled with

water at an elevated temperature, and the Vinyl Chloride vapors are all purged to the gasholder. The water is dropped and the poly kettle is opened to air or solvent cleaned. If it is manually cleaned, an air evactor is dropped into the poly kettle to further purge any trace of MVC vapors. The Vinyl Chloride concentration in the vapors before purging is about 500 - 1000 parts per million. The poly kettle is then high-pressure cleaned, air purged and checked for parts per million residual vinyl. The poly kettle is then manually cleaned. The monomer is charged by weight into one of eighteen polymerization kettles. The batch is heated and reacted. After the reaction is completed, the batch is transferred from a poly kettle to a stripping tank where it is stripped of residual monomers. The batch is then transferred to a slurry storage tank for purposes of blending. The resin slurry is screened through a Sweco screen as it is transferred to the slurry tank. The slurry is transferred to a centrifuge which removes the water and then screw feeds the wet cake into one of three rotary dryers. After the resin is dried, it passes through an air cyclone to separate the resin from the moist air. The resin is then sifted, weighed and transferred to one of sixteen storage silos. It should be noted that the resin can be bagged directly from two of the three dryers. The third dryer can only transfer resin directly to the silo. The resin is pulled by vacuum from the silo to a weighing unit and then is pneumatically blown to a bagger, rail car or bulk truck for shipping to the customer.

B. The present design capacity is 108 million pounds per year.

C. Each point source is specified in Subpart F, Part 61, Chapter I, Title 40.

D. General Tire considers the main point source as our polymer vent stack. This is the tail-end of our recovered Vinyl Chloride process and other sources are basically random process equipment.

(5) Process Rates through plant.

A. Average weight processed over the past twelve months is 8.7 million pounds per month.

B. Process Rates for Equipment

Polymer Kettle - Each poly kettle produces approximately 750 pounds of PVC per hour. This is on a batch basis, and the 750 pounds is an average.

Recovery Gasholder - The recovery gasholder handles all of the MVC vapors which can be controlled from the plant. It handles approximately 36,000 pounds of MVC vapor per day.

Slurry Tanks - Each of the eleven slurry tanks handles approximately 40,000 pounds of resin in slurry form per day.

Stripping Tanks - There are six stripping tanks, two for each poly kettle line. The poly kettle line consists of six poly kettles. Each stripper handles approximately 107,000 pounds of PVC per day.

Rotary Dryers - There are three rotary dryers which are equipped with Bird centrifuges and screw feed conveyors. The large #3 dryer handles approximately 180,000 pounds per day, whereas each of the two smaller dryers, #1 and #2, handles approximately 70,000 pounds of resin each per day.

Transfer Unit - There is one transfer unit per dryer and is capable of transferring resin to any one of the sixteen storage silos. These transfer units transfer 100% of the resin on #3 dryer and approximately 70% of the resin from #1 and #2 dryers. Approximately 30% of the resin from #1 and #2 dryers goes to bags.

Silos - Of the sixteen silos, six silos load resin by gravity into bulk trucks and rail cars. Ten silos are used for intermediate storage and normally transfer resin from these silos to the gravity silos unless the resin is to be bagged. It is then transferred to a surge hopper for bagging.

(6) Control Equipment Presently in Use

(i) Primary Control Devices

A. Gasholder Usage to Eliminate MVC Vapors from the Atmosphere - The basic purpose of the gasholder is to enable the venting of any equipment containing Vinyl Chloride under pressure so that this material can be recovered and not emitted to the atmosphere. Listed are many of the items throughout the process that we vent or bleed down to the gasholder which operates at approximately 22 inches water pressure:

1. Relief valves from compressors.

2. Rupture discs and relief valve from pressure vessels.

3. Poly kettle purge vapors as a poly kettle is being filled with water.

4. Miscellaneous venting to open tanks, pumps, lines, weigh scales, condensers, knockout pots, etc., is affected using the gasholder.

5. Vacuum pump discharge from slurry stripping goes to the gasholder.

6. Manual poly kettle venting is used to the gasholder in attempts to prevent a batch from blowing a rupture disc and/or relief valve, consequently preventing large amounts of Vinyl Chloride from being released to the atmosphere.

B. Purge Water System Including Water/Vapor Dump System - A purge water system is used to fill each reactor completely full of heated water (150°F. plus) prior to opening the reactor. The purpose of this procedure is to purge the residual Vinyl Chloride vapors from the poly kettles to the gasholder. The system is designed with a float control valve such that when the poly kettle is full of water the float control valve closes and does not allow water vapor to pass from the poly kettle into the gasholder system. The poly kettle manhole is opened as the water is being dropped to a sealed drop system on a polymer floor. As the water is dropping it pulls air into the poly kettle so that Vinyl Chloride is not emitted into the atmosphere in the room. The poly kettle is then opened as described in the process section of this report on poly kettles.

C. Pressure Test System - After a poly kettle has been cleaned and is ready for charging, it is full of air. This air is displaced by filling the poly kettle completely full of water and then hydrostatically pressure testing the poly kettle. The importance of this step is obvious in that any leaks on the poly kettle are detected and fixed prior to the water being dropped. The hot water is displaced from the poly kettle using vinyl chloride vapor. The water drops to a tank with a barometric seal such that only the water leaves the tank, and if the operator pushes too much vapor into the poly kettle, it automatically vents off the tank into the gasholder so that no Vinyl Chloride losses to the atmosphere are encountered.

D. Primary MVC Recovery and Stripping System - This system consists of six dump tanks, vacuum pumps, and knockout pots. The batch is dropped to the stripping tank and heated with vacuum to remove the residual Vinyl Chloride. These vacuum pumps discharge to the gasholder. The recovered monomer from the gasholder is then compressed, condensed, the inerts vented, and liquid Vinyl Chloride is returned to the storage tank for recharging to the poly kettles.

E. Gasholder Chiller Vent System - As previously mentioned, the use of a gasholder in our vapor recovery system has allowed us to vent many numerous items throughout the plant which contain Vinyl Chloride under pressure. Instead of having to bleed down equipment and/or lines to the atmosphere, we can bleed these into the gasholder which holds a large volume of Vinyl Chloride vapor at 22" water pressure. The chiller vent system condenses the Vinyl Chloride vapors passing through the primary condenser at high pressure and returns the condensed liquid to the process. It has a flow control orifice that allows the inerts to vent to the vent stack and returns the liquid Vinyl Chloride for re-use. The chiller vent system is the "tail end" of our recovery system.

F. Failsafe Valves on Storage and Transfer Tanks - General Tire has installed an automatic failsafe valve system on all of its storage and transfer tanks holding Vinyl Chloride. The system can be manually activated in several areas of the plant or is automatically activated when a fire alarm or loss of electrical, instrument air, or process control in that area is activated. The valves which are placed directly on the bottom of each storage tank close immediately and prevent Vinyl Chloride from continuing to flow into the process which could result in a major spill to the environment.

G. THF Solvent Cleaning System for Poly Kettle - This system is designed to clean the polymerization kettles without opening the polymerization kettle. The preheated solvent will be pumped into the reactor, agitated for a given period of time and then returned to the THF recovery system. The benefits from this system are numerous, and only the more significant ones are listed below:

1. Eliminate fugitive Vinyl Chloride leaks from entering the atmosphere due to opening the poly kettle.

2. Eliminate handling in the open atmosphere poly kettle cleanings and scrapings, as these typically contain high levels of residual Vinyl Chloride.

3. Poly kettle openings and closings are greatly reduced (approximately 60 charges between cleanings) so that the poly kettles can be made tighter and more leak proof using more permanent opening and closing fittings.

(ii) Secondary Control Devices

None are presently installed, however, we are installing an experimental incinerator to take the polymer vent stack emissions which is our only direct emission source, and incinerate it. This is discussed in the waiver request section.

(iii) Control Efficiency of Each Device

It is not possible to establish the efficiency of each device at this time. The standard as we understand it, does not specify an efficiency but requires the emission to be 10 ppm Vinyl Chloride or less.

(7) General Tire cannot comply with the Standard for Vinyl Chloride as delineated in Part II, Part 61, of Chapter I, Title 40, and will request waivers to many parts of the Standard. These waivers are listed separate in Section (b) of this report as General Tire does not presently comply with any part of the Standard completely.

Sincerely,

THE GENERAL TIRE & RUBBER COMPANY

H. E. Jewett
Plant Manager

HEJ/ikb

Sample	[redacted]	
	EPA	Company
September 29	0.51	0.50
October 4	[redacted]	

On the October 4 test, the first sample was taken when the water reached 185°F and the second sample was taken five minutes later.

The test results indicate the source to be in compliance with 61.65(b)(9)(i) during both tests.

Reactor Opening Loss

The results of the test have been recalculated and is 0.00037 grams VCM/Kg PVC which is identical to the company's calculation. The test indicates the source to be in compliance with 61.64(a)(2).

In correcting the results of the bag samples for the moisture, the company used the weight percent rather than the volume percent. This would result in an error of approximately 0.3%.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: November 28, 1978

SUBJECT: Vinyl Chloride Compliance Test Review - General Tire Company - Ashtabula, Ohio.

FROM: John Connell, Technical Advisor
Special Projects Section

TO: Bruce Varner
Air Enforcement Branch

THRU: Lucien Torrez, Chief
Special Projects Section

A report dealing with the observation of these tests has previously been submitted to the Air Enforcement Branch.

Tail Gas

No vinyl chloride was detected in any of the three bag samples with a lower detectable limit of 0.16 ppm. A copy of the continuous monitor printout was not included in the report but the report does state that 0.168 ppm was the highest monitor reading during the sampling periods. Since no vinyl chloride was detected in the samples, it does not appear worthwhile to request the company to submit a copy of the monitor printout.

Resin Residual

The sample was weighed to only two places rather than three places are required by Method 107. This would result in an error of approximately 0.5%. The results of the test have been recalculated to be 93 ppm compared tc 95 ppm as calculated by the company. The test results indicate the source to be in compliance with 61.64 (e)(1)(ii).

[redacted]

Two wastewater tests were conducted, one on September 29 and the other on October 4. The second test was not observed. Two tests were conducted because the operating conditions were changed. For the first test, the water was stripped for 45 minutes at 190°F and a vacuum of 11 inches Hg. For the second test the water was stripped for 7 minutes at 185°F and a vacuum of 13 inches Hg. Once again the error introduced by weighing the sample to only two places would be only 0.5%. The results of both tests have been recalculated and are summarized below:

EPA FORM 1320-6 (REV. 3-76)

080648

132

GTR CHEMICAL COMPANY

P O BOX 68 • ASHTABULA, OHIO 44004

PHONE: (216) 998-1120

September 14, 1982

Mr. Larry F. Kertcher, Chief
Air Compliance Branch
Air Management Division
U.S.E.P.A., Region V
230 S. Dearborn Street
Chicago, Illinois 60604

Dear Mr. Kertcher:

Attached is General Tire & Rubber Company's Ashtabula Plant six-month report for Vinyl Chloride, covering the period from March 1, 1982, through August 31, 1982.

As indicated attached, a listing of BVCM significantly over 400 ppm on the days where the daily average exceeded the permit limit.

Sincerely,

GTR CHEMICAL COMPANY

H. Graff
Technical Superintendent

HG/ikb

cc: W. J. Henrick
R. L. Jackson
H. E. Jewett
R. W. Laundrie

081100

RVCM SIGNIFICANTLY OVER 400 ppm

	RVCM	PRODUCT TYPE	DUMP TANK	REASON
May 20, 1982				
	1510	V-112	2B	Poor Vacuum - Cause Unknown
	1180	V-112	2B	Poor Vacuum - Cause Unknown
May 24, 1982				
	4974	V-112	2B	No Vacuum - Cause Unknown
May 27, 1982				
	2474	V-107	3A	Poor Vacuum - Problem with VAC in recovery
	5466	V-107	3A	No Vacuum - Problem with VAC in recovery
May 30, 1982				
	5277	V-230	2B	No Vacuum - Problem with VAC in recovery
May 31, 1982				
	1205	V-107	3A	Lost Vacuum - Problem with VAC in recovery
	1477	V-107	1A	Lost Vacuum - Problem with VAC in recovery
	4594	V-230	2A	Lost Vacuum - Problem with VAC in recovery
	1903	V-220	2A	Poor Vacuum - Problem with VAC in recovery
June 15, 1982				
	18568	V-120E	1B	Stripped at 118° F; Temp. Controller not set at proper temperature
	5341	V-220	2A	Poor Vacuum
June 16, 1982				
	2870	V-220	2A	Poor Vacuum - Water recirculation line plugged
	2521	V-220	2A	Poor Vacuum - Water recirculation line plugged
June 17, 1982				
	10193	V-107	3B	Steam injectors plugged
June 23, 1982				
	2708	V-85	3B	Poor Vacuum - Lined up to same Vacuum pump as water stripper
	1211	V-85	1A	Poor Vacuum - Automatic drain plugged
	2679	V-85	3A	Poor Vacuum - Problem with VAC in recovery

08117

	RVCM	PRODUCT TYPE	DUMP TANK	REASON
June 24, 1982				
	1790	V-85	1A	Poor Vacuum - Automatic drain plugged
	2081	V-85	1A	Poor Vacuum - Automatic drain plugged
	1963	V-85	1A	Poor Vacuum - Automatic drain plugged
	2789	V-85	3B	Poor Vacuum - lined up to same Vacuum pump as water stripper
	2366	V-85	3B	Poor vacuum - lined up to same Vacuum pump as water stripper
	1805	V-85	3B	Poor Vacuum - lined up to same Vacuum pump as water stripper
	3908	V-229	2A	Unknown
June 25, 1982				
	2325	V-85	3B	Poor Vacuum - lined up to same Vacuum pump as water stripper
	4753	V-85	1A	Poor Vacuum - Automatic drain plugged
	2334	V-85	1A	Poor Vacuum - Automatic drain plugged
	2314	V-120C	1A	Poor Vacuum - Automatic drain plugged
	1082	V-230	2A	Lost Vacuum toward end, VAC in recovery
June 26, 1982				
	1482	V-120C	1A	Poor Vacuum - Automatic drain plugged
	3015	V-120C	3A	Poor Vacuum - VAC in recovery
July 12, 1982				
	4441	V-112	2B	Poor Vacuum - lined up to same Vacuum pump as water stripper
	1733	V-50	1A	Poor Vacuum - level transmitter for separator tank off calibration
	1364	V-50	1A	Poor Vacuum - level transmitter for separator tank off calibration
July 13, 1982				
	1597	V-112	2B	Poor Vacuum - lined up to same Vacuum pump as water stripper
July 19, 1982				
	1040	V-85	1A	Poor Vacuum - Recirculation water line plugged
	2641	V-85	1A	Poor Vacuum - Recirculation water line plugged
	2917	V-85	1A	Poor Vacuum - Recirculation water line plugged

081118

	RVCI	PRODUCT TYPE	DUMP TANK	REASON
July 24, 1982				
	2744	V-65	1A	Poor Vacuum - Recirculation water line plugged, level control malfunctioned
	2493	V-65	1A	Poor Vacuum - Recirculation water line plugged, level control malfunctioned
August 6, 1982				
	3424	V-107	3B	Poor Vacuum - Seal water heat exchanger plugged
	3056	V-107	3B	Poor Vacuum - Seal water heat exchanger plugged
	2482	V-107	3B	Poor Vacuum - Seal water heat exchanger plugged
	2101	V-107	3A	Poor Vacuum
	1004	V-112	1B	Vacuum up and down
August 8, 1982				
	3536	V-220	2B	Steam injector plugged
	1427	V-220	2B	Steam injector plugged
August 27, 1982				
	2484	V-107	3A	Poor Vacuum - Reason Unknown
	3503	V-107	3A	Poor Vacuum - Reason Unknown
August 28, 1982				
	1910	V-107	3A	Poor Vacuum - Reason Unknown
	2978	V-107	3A	Poor Vacuum - Reason Unknown
	3558	V-107	3A	Poor Vacuum - Reason Unknown

881119

GTR CHEMICAL COMPANY
P O BOX 68 • ASHTABULA, OHIO 44004
PHONE. (216) 998-1120

August 3, 1983

Mr. Mark Baumgardner
Ohio E.P.A.
Northeast District Office
2110 E. Aurora Road
Twinsburg, Ohio 44087

Dear Mr. Baumgardner:

On July 25, 1983, at approximately 1530 hours, the Ashtabula plant underwent an electrical power outage which resulted in emissions of Vinyl Chloride into the atmosphere. This was the result of problems that C.E.I. experienced with their power transmission equipment for our main feeder line. Furthermore, the equipment to automatically switch this plant to the auxiliary power feeder line failed to operate, thus resulting in a complete electrical outage for this facility. Electrical power was off for approximately 35 minutes until a C.E.I. employee arrived here and manually switched us onto the other feeder.

As a result of the power outage, agitation and cooling water was lost on all reactors. Four of the batches in progress (No. 6018, R-313; No. 6020, R-312; No. 6021, R-304; and No. 6024, R-318) generated excessive pressure (160 psig or greater) and were manually vented to the atmosphere to prevent imminent relief valve discharges. As a result of this action and subsequent action taken during the outage and after the electric power was restored, relief valve discharges were prevented. Batches were not shortstopped during the electrical failure because there was no way to mix the shortstop agent into the batch after it was added.

Once power was restored, small amounts of shortstop agent were added to control the batches where required. Venting of several batches to the gasholder was also required to lower the pressure in some reactors to a safe level.

It is estimated that approximately [redacted] vented to the atmosphere as a direct result of this power failure.

Sincerely,

GTR CHEMICAL COMPANY

C. E. Reynolds
Process Engineer, Sr.

CER/lkb

Olin Corporation				TWMIC Index
OC-101	Chloroform ($CHCl_3$) Tetrachloroethane (TCA) Tetrachloroethylene (PCE)		4.6 ppb 4.0 " 4.0 "	1980
OC-102	"Chlorobenzene in OC discharge" Chloroform ($CHCl_3$) Tetrachloroethylene (PCE) Tetrachloroethane (TCA) Bis(2-ethylhexyl)phthalate		Toxics Summary Report, D.Barna and D. Easterling	1982 (Rev.)
OC-103	Monochlorobenzene (MCB)		1799 ppm	1982
OC-104	"Chlorobenzene in OC discharge"		Toxics Summary Report, D.Barna and D. Easterling	1982
OC-104	Chlorobenzene violation	(a) (b) (c)	13.7 kg/day (8.4 permit max) 11.3 kg/day 15.8 kg/day	1979 1978
OC-105	Chlorobenzene		4000-7000 ug/L 6.91-13.61 kg/day	1980
OC-106	Chlorobenzene		13.7 kg/day (repeat-104)	1979
OC-107	Chlorobenzene	(a) (b)	15.8 kg/day 11.3 kg/day (both repeats-104)	1978
OC-108	Contaminated sediment/dredging			1982
OC-109	Chlorobenzene	(a) (b) (c) (d) (e) (f) (g) (h)	0.89 mg/L (0.2 mg./L perm) 1.84 mg/L 0.63 " 2.54 " (4.28 kg/day) " 0.90 " (1.77 ") " 1.72 " (3.03 ") " 54.61 " 8.39 "	1976 " " " " " " "
OC-110	MCB analytical results too low by 20 x (apx) due to loss between sampling and analysis			1975
OC-111	Avg. flow 250 gpm, MCB 4 mg/L, 5.45 kg/day			1975
OC-112	Chlorobenzene at 4.70 mg/L (perm. 0.2 mg/L) violation six times			1975

OC-113	Chlorobenzene Max.Perm.	4.2 mg/L	1976-78
OC-114	Chlorobenzene	40 mg/L (0.3 mg/L perm) 133 lbs/day (0.79 lb/day perm)	1974
OC-115	Chlorobenzene	13.7 kg/day (8.4 " perm)	1979
OC-116	Chloroform ($CHCl_3$) Tetrachloroethene (TCA) Tetrachloroethylene (PCE) Chlorobenzene	4.6 ppb 4.0 " 4.0 " 13.7 kg/day (8.4 perm.) 10.0 kg/day	1979-80

OC-117 "Mercury in 1978
12,000 lbs "sludge" precipitated.

cont. Tetrachloroethylene (TCE)	22 ppm
Hexachloroethane (HCA)	32 "
Hexachlorobenzene (HCB)	38 "
Fluoranthene (FLA)	- (trace?)
Chromium (Cr)	18, 21, 19 ppm
Nickel (Ni)	281, 340, 866 ppm
Lead (Pb)	48, 37, 44 ppm
Arsenic (As)	4.3, 5.6, 5.0 ppm
Thallium (Ti)	561, 38, 422 ppm
Mercury (Hg)	294, 331 ppb

As "Suspended Solids" - 4,264 ppm in waste (carbonates,hydroxides)
Flow: 750,000 gal/mo.
Sp. Gr. 1.038

TCE
HCA
HCB
FLA
Cr
Ni
Pb
As
Ti

OC-118	Monochlorobenzene (MCB)	12.2 Hg kg/day (8.4 kg/day perm.)	1977
OC-119	No hexachlorobenzene (HCB)		1977
OC-120	(a) Susp. Sols.- March 1972 Avg. 56 mg/L		1972
	(b) Susp. Sols.- major problem in effluent		1969
OC-121	Bis-2-ethylhexylphthalate Arsenic (As)	168 mg/L 10 mg/L	1979

OC-122	MCB	0.877 lb/hr max 0.174 lb/hr avg	1978
OC-123	"MCB above permitted value"		1974
OC-124	MCB vapor discharge HCE vapor discharge	3.818 lb/year 0.400 "	1979
OC-125	Attachment 14	Barna & Easterling, "Toxic Summary Report"	1980
	$CHCl_3$	4.6 ug/L	
	PCE	4.0 "	
	TCA	4.0 "	
	Phthalate ester	1.5 "	
	MCB	13.7 kg/day (8.4 kg/day perm)	
*OC-126	$CHCl_3$	(1.5 - 26.3 ug/L)	1980
	PCE	(")	
	TCA	(")	

Att. 14 - Barna & Easterling's "Toxic Summary Report" - Summary pages only.

*USEPA Westlake, Ohio Office

OC-127	0.384 lb HCB in 12,000 lb sludge (38 ppm) As at 5.6 ppm Hg at 331 ppb	1979
OC-128	Field's Brook excavation. Soil levels of MCB up to 2,870 ppm, MCB in Field's Brook sediment up to 1,799 ppm	1982
OC-129	6,500,000 lb "Ko27" waste generated annually.	1980

Olin Corporation Ashtabula - January 22-23, 1980
(3 grab samples)

Date/Time of Collection	1-22-80/1130	1-22-80/2255	1-22-80/1127	
	Sample Number and Concentration (ppb)			
	VOA #1	VOA #2	VOA #3	Reagent B
	EDO472	EDO472	EDO472	EDO472
Compounds Detected	80-EM03S07	80-EM03S08	80-EM03S09	80-EM03R
1,1-Dichloroethane	<2.2	<2.1	<1.7	2.9
1,2-Dichloroethylene	3.7	<1.1	2.2	1.1
Chloroform	4.7	3.6	4.6	<1.1
1,2-Dichloroethane	<1.1	<1.1	<1.1	<1.1
1,1,1-Trichloroethane	<1.7	<1.7	<1.7	<1.7
Carbon Tetrachloride	1.8	3.0	2.1	<1.2
Bromodichloromethane	<3.8	<3.8	<3.8	<3.8
1-Bromo-2-Chloroethane	<0.6	<0.6	<0.6	<0.6
1,2-Dichloropropane	<0.7	<0.7	<0.7	<0.7
cis-1,3-Dichloropropene	1.5	<0.5	<0.5	<0.5
ene	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	<6.0	<6.0	<6.0	<6.0
Chlorodibromomethane	<1.5	<1.5	1.5	1.5
1,1,2, Trichloroethane	<1.5	<1.5	<1.5	<1.5
Cis-1,3-Dichloropropene	<1.5	<1.5	<1.5	<1.5
Bromoform	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0
Tetrachloroethylene	<0.5	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	<0.5	<0.5	<0.5	<0.5
1-methoxy-1-propene*	<0.5	<0.5	<0.5	<0.5
1,1 Oxybisethane*	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloro - 1,2,2-Trifluoroethane*	<0.5	<0.5	<0.5	<0.5

*Concentrations of all compounds denoted (*) were estimated versus the response of the other compounds.

U.S. Environmental Protection Agency
Region V
Surveillance & Analysis Division
Eastern District Office

Compliance Monitoring Field Report

1. Permittee Identification

[redacted]
Middle Road
Ashtabula, OH 44004

Corporate Offices:
Olin Corporation
120 Long Ridge Rd.
Stamford, CT 06904

NPDES Permit: OH 0001376

Receiving Streams:

Fields Brook to Ashtabula River

Responsible Official:

William G. McGlasson - Plant Manager
(216) 998-1176

2. Dates of Inspection and Survey: January 22-23, 1980

3. Participants

Permittee

Paul Duff, Specialist Environmental Affairs, Olin Corporate Headquarters, Stamford, Connecticut
Lawrence Matson, Production Supervisor
Robert Smith, Plant Chemist

Ohio EPA

Melinda Becker, Environmental Scientist

U.S. EPA

Mark Moloney, Environmental Engineer, Author
Charles Beier, Engineering Technician
Joseph Good, General Mechanic
Philip Geiring, Chief, Field Support Team
Roland Hartranft, Engineering Technician

4. Objective

This compliance sampling inspection was conducted pursuant to a December 19, 1979, Enforcement Division request to verify compliance with NPDES permit OH 0001376 and applicable stream standards. In addition, three special tests were performed at this facility to check for the presence of any toxic pollutants in the company discharge. These tests include static bioassay tests, scans for organic pollutants and the Ames Test.

industries surveyed, scans for organic pollutants revealed the discharge in trace amounts of similar contaminants found in the fish and sediments. The salient factor here may be the bioaccumulation of organics in fish resulting from a long term exposure to low level organic pollutants.

b. Other priority pollutants have been identified in Fields Brook sediments and/or fish that were not detected in the recent (1980) toxics sampling surveys at area industries. The priority pollutants found in more than trace amounts include:

- hexachloroethane
- hexachlorobenzene
- 1,2,4 - trichlorobenzene
- vinyl chloride
- 1,1 - dichloroethylene
- 1,1,1 - trichloroethane
- 1,1,2 - trichloroethane
- chlorobenzene

[redacted]eral Tire in past surveys as well as chlorobenzene in the Olin Corporation discharge.

c. While at the time of a sampling survey in 1980, Detrex Chemical Industries is a likely source of chlorinated organic contamination. Prior to 1980, Detrex manufactured chlorinated solvents, principally trichloroethylene and perchloroethylene. The plant used a series of lagoons for disposal of waste from their chlorinated solvents operation which have since been covered. Through seepage and runoff, chlorinated organics, such as trichloroethylene and similar compounds, are likely to be entering Fields Brook. Grab samples of Detrex discharge taken in association with a RCRA and Section 311 investigation showed the presence of trichloroethene. Trichloroethylene is a priority pollutant and was found in trace concentrations in core samples of Fields Brook near State Street.

d. In the 1980 sediment survey, the highest concentration of zinc (2600 mg/kg) was found at the mouth of tributary entering Fields Brook from the south along Route 11. This may reflect the discharge of P&M - Metals Reduction Plant. Based on the type of plant operation, significant organic contamination is not suspected. The organic data for sediments at this site show no appreciable organic contamination.

e.

3. Impact on Groundwater

a. The soil types, groundwater characteristics, and potential for groundwater contamination vary widely within the Ashtabula Study area. As the potential for pollution of groundwater is extremely site specific, soils investigations are necessary to adequately determine the direction and extent of pollutant movement.

b. With respect to groundwater considerations, RCRA reconnaissance surveys identified Detrex Chemical Industries, International Minerals and Chemical Corporation (IMC), Reserve Environmental Services (RES), and Rockwell International - Brake Division as having the potential for the greatest impact on the subsurface water environment.

5. Summary of Findings and Conclusions

a. The sampling results from this compliance sampling inspection show Olin to be achieving the limits contained in the NPDES permit. During 1979 the company's self monitoring reports indicate that there were, however, a total of eleven instances when the NPDES limits were not met by the company.

b. Based upon the data collected during this study the Olin discharge causes the concentrations of copper and dissolved solids in Fields Brook to exceed the maximum criteria in Ohio Water Quality Standards - Warmwater Habitat.

c. A total of eight organic compounds were found to be present in the Olin discharge sample. The concentration of these compounds ranged from 1.3 ug/l to 26.3 ug/l. Seven of these were volatile organics while the one was a non-volatile organic. The seven volatile organics were: 1,2 dichloroethylene, chloroform, [illegible] Trans-1,3-Dichloropropene; [illegible] tetrachloroethane. All of these compounds can be described as [illegible] 1,2 dichloroethylene which is moderately toxic. Four of these, are known or suspected carcinogens. These four are carbon tetrachloride, [illegible] and bromoform. The non-volatile organic found in the [illegible] bis(2-ethylhexyl)phthalate, a phthalate ester. Phthalate esters are detrimental to aquatic organisms at low concentrations. The concentration of this compound measured in the Olin effluent, however, was below the Ohio Water Quality phthalate ester standard for a warmwater habitat of 0.003 mg/l.

d. The Ames Test performed on the Olin effluent sample [illegible] that is, the effluent did induce a mutagenic/carcinogenic response in the test bacteria. A possible cause may be the four organic compounds present in the effluent which are known or suspected carcinogens.

e. The static fish bioassay results were inconclusive, however, the 24 and 48 hour mortality to daphnia averaged 95% and 100%, respectively.

6. Description of Permittee

A. Facility

The Olin Corporation in Ashtabula manufactures meta-toluene, diisocyanate(TDI) which is used in the production of polyurethane foams. Two byproducts of TDI production, hydrochloric acid and ortho-toluenediamine (O-TDA) are also produced at this plant. Operations at the facility are on a 24 hour per day, 7 day per week basis. The plant location and the location of its wastewater discharge to Fields Brook are shown in Attachment 1.

B. Process

Attachment 2 is a schematic of the TDI production process. The raw materials used in the manufacture of TDI are: coke, oxygen, carbon dioxide, chlorine, and TDA.

The process begins wtih carbon, in the form of coke, being burned to produce carbon monoxide (CO). The CO gas is passed through a scrubber in order to remove coke fines and to cool the gas. The CO gas is then reacted with chlorine to produce carbonyl chloride. Together with toluene diamine, the carbonyl chloride is reacted in an organic solvent, monochlorobenzene. After this reaction, several distillation steps are performed to remove the product and the by-product. The first distillation removes the by-product HCl which is sold as acid. The second step recovers unreacted

A Report on the Acute Toxicity of Effluent from Olin Corporation Outfall 001 to *Daphnia pulex*

Report Number 81-122 [illegible]

Biomonitoring Section

Ohio Environmental Protection Agency

In conjunction with a special study of Fields Brook and [illegible] for that discharge into it, grab samples were taken from a total of [illegible] sites for static screening bioassays. The intention of the study was to survey as many sites as possible in one day to determine if a toxicity problem existed at any site. It was practical to use only Daphnia pulex as the test organisms.

A grab sample of effluent from outfall 001 of the SCM Corporation was collected and used in a 48-hour static screening bioassay with D. pulex as the test organism. Details of the test may be found on the attached bioassay report form. The sample was acutely toxic to D. pulex. Eighty percent of the daphnids exposed to the effluent were rendered immobile during the test.

These screening bioassays were utilized to determine if an effluent was acutely toxic to the test organism and indicate if additional screening bioassays using D. pulex and the fathead minnow, Pimephales promelas, should be conducted. Based upon the results of this screening bioassay further screening bioassays involving both D. pulex and P. promelas should be conducted.

Toxics Summary Report
Ashtabula Problem Area

David R. Barna
Donald F. Easterling

United States Environmental Protection Agency
Region V
Surveillance and Analysis Division
Eastern District Office
Westlake, Ohio

Olin

120 LONG RIDGE RD., STAMFORD, CONN. 06904

September 29, 1982

Mr. Gary Gifford
State of Ohio Environmental
Protection Agency
Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087

Dear Mr. Gifford:

On September 24th, during our telephone discussion of Olin's Fields Brook dredging project, you requested Olin's sediment sample analyses. This information is enclosed. Toluene diamine (TDA) was not detected in the initial samples and not investigated in the later samples. [redacted] of water discharges in accordance with Olin's NPDES permit was the primary concern.

If I can provide additional assistance to you, as you evaluate Olin's request for credit for the cost of the dredging project against any liability for future remedial action, if any, required in Fields Brook, please call me.

Sincerely yours,

Richard S. Hendey, Jr.
Manager, Regional Environmental
Affairs

RSH/aa

FIELDS BROOK SEDIMENT SAMPLES

DATE	LOCATION	SAMPLE DEPTH	[redacted]	[illegible]
7/15/81	100 ft. West of Outfall 001	0-3 in.	41	nn
7/15/81	50 ft. West of Outfall 001	3-6 in.	14	nn
7/15/81	10 ft. West of Outfall 001	2-6 in.	25	nn
7/15/81	Between Outfalls 001 and 002	2-4 in.	16	nn
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
8/27/81	10 ft. West of Outfall 001	1 ft.	[redacted]	–
8/27/81	10 ft. West of Outfall 001	2 ft.		–
8/27/81	10 ft. West of Outfall 001	3 ft.		–
8/27/81	10 ft. West of Outfall 001	4 ft.		–
8/27/81	10 ft. West of Outfall 001	5 ft.		–
8/27/81	100 ft. West of Outfall 001	1 ft.	209.00	–
8/27/81	100 ft. West of Outfall 001	2 ft.	155.69	–
8/27/81	100 ft. West of Outfall 001	3 ft.	42.14	–
9/1/81	100 ft. West of Outfall 001	4 ft.	.05	–
9/1/81	100 ft. West of Outfall 001	5 ft.	nn	–
9/1/81	400 ft. West of Outfall 001	0-3 in.	1.01	–
4/30/82	8 ft. East of Outfall 001	1 ft.	1299	–
4/30/82	8 ft. East of Outfall 001	2 ft.	3217	–
4/30/82	8 ft. East of Outfall 001	33 in.	666	–

industries surveyed, scans for organic pollutants revealed the discharge in trace amounts of similar contaminants found in the fish and sediments. The salient factor here may be the bioaccumulation of organics in fish resulting from a long term exposure to low level organic pollutants.

b. Other priority pollutants have been identified in Fields Brook sediments and/or fish that were not detected in the recent (1980) toxics sampling surveys at area industries. The priority pollutants found in more than trace amounts include:

- hexachloroethane
- hexachlorobenzene
- 1,2,4 - trichlorobenzene
- vinyl chloride
- 1,1 - dichloroethylene
- 1,1,1 - trichloroethane
- 1,1,2 - trichloroethane
- chlorobenzene

Vinyl chloride has been detected in the effluent of General Tire in past surveys as well [redacted].

c. While not the subject of a sampling survey in 1980, Detrex Chemical Industries is a likely source of chlorinated organic contamination. Prior to 1972, Detrex manufactured chlorinated solvents, principally trichloroethylene and perchloroethylene. The plant used a series of lagoons for disposal of waste from their chlorinated solvents operation which have since been covered. Through seepage and runoff, chlorinated organics, such as trichloroethylene and similar compounds, are likely to be entering Fields Brook. Grab samples of Detrex discharges taken in association with a RCRA and Section 311 investigation showed the presence of trichloroethene. Trichloroethylene is a priority pollutant and was found in large concentrations in core samples of Fields Brook near State Street.

d. In the 1980 sediment survey, the highest concentration of zinc (3600 ug/g) was found at the mouth of tributary entering Fields Brook from the south along Route 11. This may reflect the discharge of RMI - Metals Reduction Plant. Based on the type of plant operation, significant organic contamination is not suspected. The organic data for sediments at this site show no appreciable organic contamination.

3. Impact on Groundwater

a. The soil types, groundwater characteristics, and potential for groundwater contamination vary widely within the Ashtabula Study area. As the potential for pollution of groundwater is extremely site specific, soils investigations are necessary to adequately determine the direction and extent of pollutant movement.

b. With respect to groundwater considerations, RCRA reconnaissance surveys identified Detrex Chemical Industries, International Minerals and Chemical Corporation (IMC), Reserve Environmental Services (RES), and Rockwell International - Brake Division as having the potential for the greatest impact on the subsurface water environment.

NonVolatile Organics Detected
(one 24-hour composite sample)

1. Bis(2-ethylhexyl)phthalate (2.4 µg/l)
2. phenanthrene (0.5 µg/l)
3. anthracene (0.5 µg/l)

The first eight volatile organics listed and all three non-volatile organic compounds are priority pollutants.

Ames Test

The Ames Test performed on the General Tire effluent sample proved to be negative. That is the effluent did not induce a mutagenic/carcinogenic response in the test bacteria.

4. [redacted] (Appendix, Attachment 14). 3

The Olin Corporation operates a facility for the manufacture of meta-toluene, disocyanate (M-TDI), used in the production of polyurethane forms.

NPDES COMPLIANCE

The sampling results from this compliance sampling inspection show Olin to be achieving the limits contained in the NPDES permit. During 1979 the company's self monitoring reports indicate that there were, however, a total of eleven instances when the NPDES limits were not met by the company.

Based upon the data collected during this study the Olin discharge causes the concentrations of copper and dissolved solids in Fields Brook to exceed the maximum criteria in Ohio Water Quality Standards - Warmwater Habitat. The loading of dissolved solids during the survey was found to be 13,012 lbs/day.

Toxicity Evaluation - Static Bioassays and Organic Chemical Analyses

The static fish bioassay results were inconclusive, however, the 24 and 48 hour mortality to daphnia averaged 95% and 100%, respectively.

A total of eight organic compounds were found to be present in the Olin discharge sample. The concentration of these compounds ranged from 1.5 µg/l to 26.3 µg/l. Seven of these were volatile organics while the one was a non-volatile organic. The seven volatile organics were: 1,2 dichloroethylene; chloroform, carbon tetrachloride; Trans-1,3-Dichloropropene; bromoform; tetrachloroethylene; 1,1,2,2-tetrachloroethane. All of these compounds can be described as highly toxic except 1,2 dichloroethylene which is moderately toxic. Four of these, are known or suspected carcinogens. These four are carbon tetrachloride, chloroform, tetrachloroethylene, and bromoform. The non-volatile organic found to be present was Bis(2 ethylhexyl)-phthalate, a phthalate ester. Phthalate esters are detrimental to aquatic organisms at low concentrations. The concentration of this compound measured in the Olin effluent, however, was below the Ohio Water Quality phthalate ester standard for a warmwater habitat of 0.003 mg/l.

Ames Test

The Ames Test performed on the Olin effluent sample proved to be positive. That is, the effluent did induce a mutagenic/carcinogenic response in the test bacteria. A

II. FINDINGS AND CONCLUSIONS

A. Ambient Environmental Problems

1. Contaminated Fish Flesh

a. Various studies over the years have shown that fish collected in the Ashtabula River and Fields Brook contain extremely complex bioaccumulative organic compounds. Relative to other fish sampled and analyzed in major United States watersheds, a 1976 study by ERL - Duluth showed the Ashtabula River fish to contain the greatest variety of chlorinated organics of all rivers studied. In addition to PCB's, 19 separate organochlorine compounds were identified in composite whole fish samples.

b. The bioaccumulative organics which have been detected in fish flesh analyses in the greatest concentrations include the following priority pollutants:

- hexachlorobenzene
- hexachlorobutadiene

c. Other organics identified in significant amounts include other chlorinated benzenes and styrenes.

d. Notwithstanding variability in fish sampling and accumulation of organics among fish species, follow-up studies have substantiated the presence of significant amounts of bicaccumuable chlorinated organics in Ashtabula River and Fields Brook fish.

e. Additional studies are being conducted under a grant to the University of Wisconsin from the U.S. EPA ERL - Duluth to investigate variability of organic contamination within a fish population.

2. Contaminated Sediments

a. Ashtabula River and Fields Brook sediments have been sampled on several occasions - June and September of 1979, and September 1980. Both core and surface dredge samples have been obtained. Sediments are also contaminated with a variety of toxic organic compounds as well as mercury, heavy metals, and other polychlorinated organics in high concentrations.

b. A recent investigation (September 1980) focused primarily on Field's Brook and tributary sediments. With respect to metals, zinc, mercury, lead and copper were identified in the greatest concentrations. The largest zinc concentration in the study (3600 µg/g) was found at the mouth of a tributary entering Fields Brook from the south near Route 11.

The two core samples (taken at Fields Brook near State Road and on the tributary entering Fields Brook from the north between State Road and Route 11) contained priority pollutants in significant quantities. These compounds included trichloroethylene, 1,1,2-trichloroethane, tetrachloroethylene, and 1,1,2,2-tetrachloroethane in the greatest amounts. The dredge samples at the other sites also exhibited volatile priority pollutants but in lesser concentrations.

In this study, only one sample was found to contain PCB (Aroclor 1248).

INTERNAL ONLY

[redacted]

February 1981

[redacted]

United States Environmental Protection Agency
Region V
Surveillance and Analysis Division
Eastern District Office
Westlake, Ohio

--- December 30, 1979

QUARTERLY NON-COMPLIANCE REPORT
REPORTING PERIOD: July, August, September, 1979
EFFLUENT & EVENTS STATUS

MAJOR LIST	COMPLIANCE STATUS	ACTION TAKEN OR PROPOSED	COMMENTS
NAME Olin Corporation Ashtabula NPDES NO. OH0001376 EACH 3IF00010 EFFECTIVE 10/05/78 MOD. EFF. 2/26/79 MOD. EFF. / / MOD. EFF. / / MOD. EFF. / / MOD. EFF. / / EXPIRES: 3/31/81	Effluent July, August In Compliance September Outfall 001 [redacted]	7/17/79 - Compliance Sampling Inspection conducted by District. 8/29/79 - Compliance Sampling Report sent to entity by District. 11/08/79 - Enforcement letter sent to entity from district Re: September violation.	9/11/79 - Notice of noncompliance sent by entity for September violations. Monochlorobenzene spill contained. However, rate of discharge from containment structure questionable.

TYPE: INITIAL ___
RENEWAL _X_

Events
July, August, September
In Compliance

14013

MAJOR LIST	COMPLIANCE STATUS	ACTION TAKEN OR PROPOSED	COMMENTS
NAME Olin Corporation Ashtabula NPDES NO. OH0001376 FACN 31F00014 EFFECTIVE 3/08/74 MOD. EFF. 5/17/76 MOD. EFF. / / MOD. EFF. / / MOD. EFF. / / MOD. EFF. / / EXPIRES: 9/01/78 TYPE: INITIAL X RENEWAL	Effluent [redacted] (HCB) [redacted] kg/day P[redacted]) [redacted] June In Compliance Events April, May, June In Compliance	6/7/78 - Compliance Monitoring Survey conducted by District Office. 6/22/78 - Violation letter sent by District Office. 7/10/78 - Violation letter sent by District Office.	4/17/78 - Company submitted explanation attributing violation to cleaning of distillation dryer. A process change will be made in May to eliminate need for dryer. 5/24/78 - Company submitted letter informing us of program to document facility sewer system. 5/30/78 - Company submitted explanation attributing violation to an improperly aligned shut off valve. The company has instructed plant personnel on the importance of checking valve alignments; also, operating procedures and the spill prevention plan is being reevaluated. 7/6/78 - Company submitted letter informing us of their Wastewater Characterization Study.

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. testing required	b. believed present	c. believed absent	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (optional) a. LONG TERM AVRG. VALUE (1) CONCENTRATION	a. (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	X			BDL	BDL			BDL	BDL	3	ug/l	Kg/Da			
2V. Acrylonitrile (107-13-1)	X			BDL	BDL			BDL	BDL	3	ug/l	Kg/Da			
3V. Benzene (71-43-2)	X			BDL*	BDL			BDL*	BDL	7	ug/l	Kg/Da			
4V. Bis (Chloromethyl) Ether (542-88-1)	X			BDL	BDL			BDL	BDL	7	ug/l	Kg/Da			
5V. Bromoform (75-25-2)	X			BDL	BDL			BDL	BDL	7	ug/l	Kg/Da			
6V. Carbon Tetrachloride (56-23-5)	X			BDL*	BDL			BDL*	BDL	7	ug/l	Kg/Da			
7V. Chlorobenzene (108-90-7)	X			7000	13.61	4000	6.91	1400	2.82	61	ug/l	Kg/Da			
8V. Chlorodibromomethane (124-48-1)	X			BDL	BDL			BDL	BDL	7	ug/l	Kg/Da			
9V. Chloroethane (75-00-3)	X			BDL	BDL			BDL	BDL	3	ug/l	Kg/Da			
10V. 2-Chloroethylvinyl Ether (110-75-8)	X			BDL	BDL			BDL	BDL	3	ug/l	Kg/Da			
11V. Chloroform (67-66-3)	X			BDL*	BDL			BDL*	BDL	7	ug/l	Kg/Da			
12V. Dichlorobromomethane (75-27-4)	X			BDL	BDL			BDL	BDL	7	ug/l	Kg/Da			
13V. Dichlorodifluoromethane (75-71-8)	X			BDL	BDL			BDL	BDL	3	ug/l	Kg/Da			
14V. 1,1-Dichloroethane (75-34-3)	X			BDL	BDL			BDL	BDL	7	ug/l	Kg/Da			
15V. 1,2-Dichloroethane (107-06-2)	X			BDL	BDL			BDL	BDL	7	ug/l	Kg/Da			
16V. 1,1-Dichloroethylene (75-35-4)	X			BDL	BDL			BDL	BDL	7	ug/l	Kg/Da			
17V. 1,2-Dichloropropane (78-87-5)	X			BDL	BDL			BDL	BDL	7	ug/l	Kg/Da			
18V. 1,3-Dichloropropylene (542-75-6)	X			BDL	BDL			BDL	BDL	7	ug/l	Kg/Da			
19V. Ethylbenzene (100-41-4)	X			30.3	0.059			10.1	0.023	7	ug/l	Kg/Da			
20V. Methyl Bromide (74-83-9)	X			BDL	BDL			BDL	BDL	3	ug/l	Kg/Da			
21V. Methyl Chloride (74-87-3)	X			73	.170			54	0.132	3	ug/l	Kg/Da			

Olin CHEMICALS GROUP
120 LONG RIDGE ROAD, STAMFORD, CT 06904

WILLIAM A. OPPOLD
Vice President
Manufacturing and Construction

September 29, 1980

Mr. William R. Skowronski
Group Chief - Industrial Wastewater
c/o State of Ohio Environmental
Protection Agency
Northeast District Office
21101 East Aurora Road
Twinsburg, Ohio 44087

Dear Mr. Skowronski:

RE: Application for Renewal of NPDES Discharge Point
Olin Corporation
Permit No. F314-DD
Application No. OH0001376

Olin Corporation's Ashtabula, Ohio plant respectfully submits the enclosed documents consistent with the Ohio EPA requirements for renewal of this facility's existing National Pollutant Discharge Elimination System (NPDES) permit (#314-DD) which expires on March 31, 1981.

This submission covers authorized discharge point #001. Included in the attached documents is the Ohio EPA's NPDES Application for Renewal - short form "R" and the forms and information required by 40 CFR Section 112.4(d) and 122.53(d) or (e), as defined in the May 19, 1980 Federal Register (Volume 45, No. 98).

Should you have any questions regarding the application or information contained in them, please contact us directly.

Very truly yours,

William A. Oppold

WAO/ss
Enclosures

14094

OLIN CORPORATION

OhioEPA

Re: NPDES Permit No. F 314

Mr. William McGlasson
Plant Manager
Olin Chemicals Group
P.O. Box 206
Ashtabula, Ohio 44004

November 7, 1979

Dear Mr. McGlasson:

We are in receipt of A. L. Maston's letter dated September 11, 1979, which informs us of an instance of noncompliance with the NPDES permit conditions during the month of September. The specific instances of noncompliance and/or deficiencies are as follows:

Date	Outfall	Parameter	Reported Value	Limit
9/11/79	001	[redacted]	[redacted]	[redacted]

The explanation provided in said letter for the instance of noncompliance appears satisfactory at this time. However, please be advised that such instances of noncompliance may be subject to further enforcement action pursuant to the Ohio Revised Code, Chapter 6111.

If you have any questions regarding the above, please contact the writer at 425-9171.

Yours truly,

Melinda Merryfield-Becker
Environmental Scientist

MMB:mjo

cc: Authorization & Compliance, NEDO
R. Phelps, Industrial Wastewater, CO

140124

State of Ohio Environmental Protection Agency
Northeast District Office
2110 E. Aurora Road, Twinsburg, Ohio 44087 · (216) 425-9171

James A. Rhodes, Governor
James F. McAvoy, Director

TABLE 1

Excursions for June 1979 - January 1980, As Reported by Olin in Self-Monitoring Reports

Date	Outfall	Parameter	Reported Value	Limit
9/11/79	001	[redacted]	[redacted]	[redacted]
1/15/80	001	TDS	10,339 Kg/day	10,200 Kg/day
1/16/80	001	TDS	11,165 Kg/day	10,200 Kg/day

140072

INDUSTRIAL COMPLIANCE MONITORING REPORT

Olin Corporation
Middle Road
Ashtabula, Ohio 44004

Ohio EPA NPDES Permit No. F 314

Prepared By

Melinda Merryfield-Becker
Office of Wastewater

April 10, 1980

10/307)

Olin CHEMICALS GROUP
P.O. BOX 308, ASHTABULA, OHIO 44004

Certified Mail: Return Receipt Requested

May 30, 1978

Mr. Russell Hart
Division of Industrial Wastewater
Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087

Re: NPDES Permit No. P 314 BD

Dear Mr. Hart:

A grab sample for Monochlorobenzene was taken at Olin-Ashtabula's outfall discharge point (#001) on May 25, 1978. Laboratory results indicated a discharge of 15.8 kilograms per day (versus a permit maximum of 8.4 kilograms per day). As a result of this discharge, another grab sample was immediately taken and this analysis indicated that the Monochlorobenzene discharge rate had dropped to 8.25 kilograms per day. The excursion lasted for approximately 2½ hours.

The excursion resulted from an inadvertent release of Monochlorobenzene. An improperly aligned shut-off valve resulted in Monochlorobenzene filling a receiver and subsequently overflowing into a spills containment sump. Although the majority of this material was diverted and treated on an emergency basis, a small quantity penetrated the main wastewater treatment pond and resulted in the 2½ hour excursion.

Plant personnel have been advised of the importance of checking for proper alignment of control valves. The standard operating procedure and the spill prevention plan will be evaluated to assure that Olin's response to a similar future situation is appropriate.

If you have any further questions, please don't hesitate to contact me.

Very truly yours,

OLIN CORPORATION

William G. McGlasson

William G. McGlasson
Plant Manager

WGM/am

Olin CHEMICALS GROUP
P.O. BOX 308, ASHTABULA, OHIO 44004

Certified Mail: Return Receipt Requested

April 17, 1978

Mr. Russell Hart
Division of Industrial Wastewater
Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087

Re: NPDES Permit No. F 314 BD

Dear Mr. Hart:

[redacted]. As a result of this discharge, another grab sample was immediately taken and this analysis indicated that the Monochlorobenzene discharge rate had dropped to 6.98 kilograms per day (substantially below the permit maximum).

Plant personnel conducted an investigation and discovered that MCB was discharged to the industrial sewer during cleaning operation of a plant distillation dryer. Heavy rains increased plant outfall discharge flow rates and lowered residence time in the treatment ponds. This resulted in decreased ability to settle this insoluble organic material.

Plant manufacturing personnel have investigated and reviewed distillation dryer cleaning operations. A process change will be made in our May Turnaround to eliminate need for distillation dryer in the future. In the interim, during similar cleaning operations the TDI plant sump will be isolated from the sewer system so that any inadvertent discharge of MCB can be contained and isolated by off site disposal.

If any other recommendations are generated by this group, they will be included in a standard operating procedure to assure that there is no reoccurrence of this incident.

If you have any further questions, please don't hesitate to contact me.

Very truly yours,

OLIN CORPORATION

James E. Langford
Plant Manager

JEL:am

14223

Olin CHEMICALS GROUP
120 LONG RIDGE ROAD, STAMFORD, CT 06904

September 17, 1982

Gregg Kulma
On-Scene Coordinator
U.S. EPA Region V
230 South Dearborn Street
Chicago, Illinois 60604

Mitchell E. Burack, Esq.
Office of Enforcement Counsel (WH-527F)
U.S. EPA
401 Main Street, S. W.
Washington, DC 20460

Mr. Wayne Nichols
Director, Ohio EPA
Box 1049
361 East Broad Street
Columbus, OH 43216

Re: Closure of Olin's Ashtabula, Ohio Plant

Dear Sirs:

As you may be aware, Olin has almost completed the closure and demolition of its Ashtabula, Ohio chemical manufacturing plant which is located near Fields Brook. As part of its closure procedure, Olin has undertaken extensive testing, decontamination, and disposal activities to minimize environmental impacts both during and after closure. Olin has performed activities which go substantially beyond what is required by law and regulation in order to ensure that the site will be sound environmentally once closure is complete.

[redacted] water discharges in accordance with Olin's NPDES permit. Consequently, although not compelled legally to do so, Olin included a specific Fields Brook dredging program in its site restoration plan.

The dredging will remove and dispose of approximately 500 cubic yards of sediment from the location of the outfalls to a location about 300 feet downstream in Fields Brook. The depth of the dredging will range from 3 feet to 6 inches. In order to avoid transporting sediments downstream, the brook will be temporarily diverted through a pipe during the excavation procedure. The dredged sediment will be dewatered on-site and disposed of off-site. The collected water will be stored in the

emergency spill basin and treated on-site in the plant's carbon treatment facilities. The treated water will be returned to Fields Brook in compliance with all terms and conditions of Olin's NPDES permit. Uncontaminated stone and clay will be used to restore the brook to its original elevation. The complete dredging program and disposal is estimated to cost $50,000. A Scope of Work is attached hereto (Attachment A).

Olin has thoroughly discussed the dredging project with the U.S. Army Corps of Engineers and Ohio EPA and has concluded that no written approvals or permits are required therefor. A copy of relevant correspondence is attached hereto (Attachment B).

At the time the planning for the dredging project was commenced, Olin was unaware that Fields Brook was to be designated as a priority Superfund site. The Fields Brook superfund negotiations transpiring between USEPA, Ohio EPA, and the companies located near Fields Brook have had the unfortunate result of delaying the implementation of Olin's dredging program. The plant demolition is almost complete and there is little time to complete the dredging before winter weather sets in. It is essential that the dredging program be completed in the Fall of 1982 when Olin has management personnel at the site to supervise the project and when the emergency spill basin and the carbon treatment facilities are still in place to drain and treat the water contained in the sediment. Otherwise, the cost of the dredging program may become prohibitively expensive.

[redacted] if any, required in Fields Brook; or, alternatively, that the costs expended by Olin for the dredging project be approved and certified by the responsible Federal official. We believe that such assurance or approval and certification is entirely consistent with your objective to perform work to improve environmental conditions at Fields Brook in the most cost-effective manner.

Please call me as soon as possible so that we may discuss the most appropriate by which to effect the credit or certification.

Very yours truly,

George H Pain

George H. Pain
Associate Counsel

GHP:gem

cc: Roger Hannahs, OEPA
Dennis Lee, OEPA
Steve Tuckerman, OEPA

141320

SELF MONITORING REPORT VIOLATIONS - SUMMARY SHEET

Olin Corporation

NPDES Permit No. F 314 *RD

VIOLATIONS OF DAILY MAXIMUM

Date	Parameter	Permit Limitation mg/l	Permit Limitation kg/day	Value Reported mg/l	Value Reported kg/day (computed)
5-6-76	Total Dissolved Solids		10,200		11,352
5-10-76	Chlorobenzene	.2		.89	

VIOLATIONS OF DAILY AVERAGE (MONTHLY BASIS)

Month	Parameter	Permit Limitation mg/l	Permit Limitation kg/day	Value Reported mg/l	Value Reported kg/day (computed)
May	COD		160		343
May	Total Dissolved Solids		8,160		10,271

Form A 11/12/75

SELF MONITORING REPORT VIOLATIONS - SUMMARY SHEET

Olin Corporation

NPDES Permit No. F 314 *AD

VIOLATIONS OF DAILY MAXIMUM

Date	Parameter	Permit Limitation mg/l	Permit Limitation kg/day	Value Reported mg/l	Value Reported kg/day (computed)
3-4-76	Chlorobenzene	.2		1.84	
3-25-76	Chlorobenzene	.2		.63	

VIOLATIONS OF DAILY AVERAGE (MONTHLY BASIS)

Month	Parameter	Permit Limitation mg/l	Permit Limitation kg/day	Value Reported mg/l	Value Reported kg/day (computed)
March	COD	80	160	82	192

Form A 11/12/75

143450

Olin Corporation

SELF MONITORING REPORT VIOLATIONS - SUMMARY SHEET

NPDES Permit No. F 314 *AD

VIOLATIONS OF DAILY MAXIMUM

Date	Parameter	Permit Limitation mg/l	Permit Limitation kg/day	Value Reported mg/l	Value Reported kg/day (computed)
1-8-76	Chlorobenzene	.3	.36	2.54	4.[illegible]
1-15-76	Chlorobenzene	.3	.36	.90	1.77

VIOLATIONS OF DAILY AVERAGE (MONTHLY BASIS)

Month	Parameter	Permit Limitation mg/l	Permit Limitation kg/day	Value Reported mg/l	Value Reported kg/day (computed)
January	Chlorobenzene	.2	.24	1.72	[illegible]

Form A 11/12/75

119444

SELF MONITORING REPORT VIOLATIONS - SUMMARY SHEET

Olin Corporation

NPDES Permit No. F 314 *AD

VIOLATIONS OF DAILY MAXIMUM

Date	Parameter	Permit Limitation mg/l	Permit Limitation kg/day	Value Reported mg/l	Value Reported kg/day (computed)
2-5-76	Chlorobenzene	.2		54.61	
2-12-76	Chlorobenzene	.2		8.39	

VIOLATIONS OF DAILY AVERAGE (MONTHLY BASIS)

Month	Parameter	Permit Limitation mg/l	Permit Limitation kg/day	Value Reported mg/l	Value Reported kg/day (computed)
February	COD	80	160	128	244

Form A 11/12/75

140500

Ms. Carol Fogelsong
US EPA

Mr. W. Samkow
Ohio EPA

Jan. 14, 1975

limitation between now and completion of the revised pH control system.

In addition, we still are not able to meet the limits established for monochlorobenzene in our NPDES permit. This problem was previously acknowledged in a letter from H. T. Emerson, Regional Environmental Control Manager, Olin Corporation to Mr. Willard Samkow, Director Engineering, Ohio EPA, dated November 11, 1974.

Recent analytical data confirm our original observation that the concentration of monochlorobenzene in aqueous solutions at low ppm levels decreases with time. Since the concentrations of MCB allowed in our existing permit were based on analytical data determined by an outside laboratory and the time between sample acquisition and analyses was of sufficient duration to permit a loss of substantial quantities of MCB, it appears that the original data base for MCB was low by an approximate factor of twenty (20). Consequently we are in the process of drafting an application for modification of our NPDES permit as it relates to monochlorobenzene.

Assuming that we are successful in improving control of the pH of our outfall via the revised pH control system and are successful in obtaining a modification of our permit regarding monochlorobenzene, we expect to be able to meet the Option A effluent limitations which become effective on January 1, 1976. In view of the probability that fairly frequent excursions outside the permit limits for related parameters will occur until the above mentioned corrective measures are taken, Olin will report such excursions only within the monthly monitoring report.

Very truly yours,

OLIN CORPORATION

L. D. Hinson
Plant Manager

LDH:mf

12-5820

Olin PLASTICS

P.O. BOX 308, ASHTABULA, OHIO 44004

January 14, 1975

Ms. Carol Fogelsong, Chief, Compliance Section
United States Environmental Protection Agency
Region V., Enforcement Division
230 S. Dearborn Avenue
Chicago, Illinois 60606

Mr. Willard Samkow, District Engineer
Ohio Environmental Protection Agency
Northeast District
2110 E. Aurora Road
Twinsburg, Ohio 44087

Re: NPDES Permit
No. OH 0001376

Dear Sir:

As required by the provisions of our NPDES permit, we hereby affirm our intent to continue to discharge our plant effluent through point source, serial No. 001 into Fields Brook, (Option A), after January 1, 1976.

We are also pleased to inform you that the new settling pond was completed and operational on August 25, 1974 and the new storm water lift station was commissioned on September 13, 1974 and completely operational on December 13, 1974. Consequently, outfall No. 002 will no longer have a continuous discharge to Fields Brook and therefore data relative to this source will no longer be reported in our monthly reports. This new lift station has a total capacity of 360 gallons per minute and will handle the entire dry weather flow of the storm sewer plus a substantial quantity of storm water. There will be a minimal occurrance of discharge of storm water from outfall No. 002 during the year.

Ever since outfall serial No. 002 has been eliminated as a continuous discharge point and the effluent from this source processed through the settling system, we have experienced difficulty in controlling the pH of outfall serial No. 001 within the 6.0-9.0 ranges allowed by our permit. In order to regain control of this permit parameter, we believe that we will have to revise our existing pH control system. This revision is currently being engineered and should be operational by May 1, 1975. Although we have lowered our primary pH control point, as an interim step to stay within the limits of our existing permit, we anticipate that we will frequently be as much as 1.0 pH unit above our pH maximum.

141553

Exhibit I.

Monochlorobenzene Concentrations
NPDES Permit OH0001376 Serial No.001

Date	mg/l	Date	mg/l
10/3/74	0.95	11/19/74	2.78
10/9/74	0.30	11/20/74	1.65
10/15/74	0.13	11/21/74	2.39
10/16/74	0.16	11/22/74	1.89
10/17/74	1.47	11/25/74	6.53
10/17/74	0.93	12/29/74	2.32
10/18/74	1.00	12/2/74	0.75
10/21/74	10.32*	12/3/74	1.35
10/22/74	17.97*	12/4/74	3.48
10/22/74	15.37*	12/5/74	5.90
10/24/74	9.80	12/6/74	6.17
10/25/74	9.39	12/6/74	4.08
10/30/74	9.94	12/9/74	0.90
11/31/74	9.13	12/10/74	0.86
11/1/74	2.29	12/11/74	1.28
11/1/74	2.05	12/11/74	2.95
11/6/74	5.32	12/12/74	5.37
11/11/74	9.76	12/13/74	8.11
11/12/74	21.10*	12/18/74	1.36
11/13/74	19.02*	12/19/74	3.12
11/13/74	10.45	12/19/74	1.24
11/14/74	7.74	12/20/74	1.15
11/15/74	3.24	12/26/74	31.14*
11/18/74	4.20	12/26/74	21.20*
		12/27/74	4.82
		12/27/74	3.89
		12/30/74	1.86

*Eliminated from average

1. October 1974 through December 1974, $\bar{x}$ = 3.38 mg/l
   ∴ Average value request = 4.0 mg/l.

2. Average deviation from 4 mg/l of those values > 4 mg/l for October through December, 1974 = 3.29.
   ∴ maximum value requested = 4.0 + 3.29 ≅ 7.0 mg/l.

3. At average flow rate of 250 GPM, and:
   4 mg/l concentration, MCB discharge/day = 5.45 kg or 12.00 pounds.

   7 mg/l concentration, MCB discharge/day = 9.52 kg or 20.97 pounds.

120594

file

Olin CHEMICALS

P. O. BOX 586, ASHTABULA, OHIO 44004

April 14, 1975

Mr. Willard Samkow
District Engineer
Northeast District Office
Waste Management & Engineering
Ohio EPA
2110 East Aurora Road
Twinsburg, Ohio 44087

Dear Mr. Samkow:

Re: Application for Modification to NPDES Permit OH 0001376

Per your request, the data which I used to calculate the mono-chlorobenzene levels specified in our application for permit modification are attached (Exhibit I).

The outside laboratory we used in developing the data base for the MCB levels specified in our original NPDES permit and to verify the MCB loss from effluent samples on standing was as follows:

Monsanto Research Corporation
Dayton Laboratories
1515 Nicholas Road
Dayton, Ohio 45407
(513) 268-3411

If you need any additional information in order to process the permit modification request, please give me a call.

Very truly yours,

OLIN CORPORATION

L. D. Hinson
Plant Manager

LDH:mf
Attachment

140593

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

MAY 16 1975

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RECEIVED
MAY 23 1975
Ohio Environmental Protection Agency
COMPLIANCE MONITORING

RECEIVED
'75 MAY 22 AM 8 21

Mr. R. H. Papenfuss
Works Manager
Olin Corporation
P.O. Box 206
Ashtabula, Ohio 44004

Re: Olin Corporation, Ashtabula Plant
NPDES Permit No. OH 0001376

Dear Mr. Papenfuss:

Your Discharge Monitoring Report of October 1, 1974 through December 31, 1974 indicated the following violations:

1. The concentrations of chlorobenzene discharged from outfall C01 were 4.70 mg/l average and 21.2 mg/l maximum which violated the permit conditions of 0.2 mg/l average and 0.3 mg/l maximum six times.

2. The pH of the effluent from outfall C01 ranged from 4.6 to 11.7 which violated the permit conditions of from 6.0 to 9.0 twenty-eight times.

3. The pH of the effluent from outfall 002 ranged from 6.4 to 12.2 which violated the permit conditions of from 6.0 to 9.0 thirty times.

4. The concentrations of suspended solids discharge from the outfall were 411 mg/l average and 2,226 mg/l maximum which violated the permit conditions of 215 mg/l average and 270 mg/l maximum.

5. The concentrations of total dissolved solids discharged from outfall 002 were 1,490 mg/l average and 3,963 mg/l which violated the permit conditions of 590 mg/l average and 740 mg/l maximum.

6. You have failed to submit to this office your progress report by March 1, 1975, which is required by the permit.

RECEIVED

140595

OHIO ENVIRONMENTAL PROTECTION AGENCY
MODIFICATION OF NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM(NPDES)PERMIT

ISSUE DATE:_____ EXISTING PERMIT NO: F 314 * AD

EFFECTIVE DATE:_____ APPLICATION NO: OH 0001376

ENTITY NAME: OLIN CORPORATION

FACILITY LOCATION: MIDDLE ROAD, P.O. BOX 206
ASHTABULA, OHIO 44004

In accordance with the provisions of Ohio Environmental Protection Agency Regulation EP-31-06, the above-referenced NPDES permit is hereby modified as follows:

THE INTERIM O.L & GREASE LIMIT OPERATIONAL DATE WAS MOVED TO DECEMBER 31, 1974. THE TABLE COVERING THE PERIOD FROM DECEMBER 31, 1974 TO DECEMBER 31, 1975 HAS BEEN CHANGED. THE LOADINGS HAVE BEEN COMBINED TO REFLECT THE JOINING OF 001 & 002 RESULTING IN ONLY ONE DISCHARGE POINT. THE CONCENTRATIONS HAVE BEEN RECALCULATED BASED ON COMBINED FLOW VOLUME.

THE CHLOROBENZENE LIMIT HAS BEEN INCREASED APPROXIMATELY TWENTY TIMES TO PRESENT DISCHARGE LEVELS. ALSO CHANGED WAS THE PH LIMIT SINCE DIFFICULTY IN CONTROL WAS EXPERIENCED FOLLOWING COMBINING OF 001 & 002

Attached ARE the modified pageS to the NPDES permit.

All terms and conditions of the existing permit not recommended for modification by this document will remain in effect. Further, any existing term or condition which this modification will change will remain in effect until any legal restraint to the imposition of this modification has been resolved.

When this modification is effective, the OEPA permit number will be changed to F 314*BD. The application number will remain OH 0001376.

Ned E. Williams, P.E.
Director

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OPTION B) DISCHARGE TO LAKE ERIE

1. During the period beginning January 1, 1976 and lasting until September 1, 1978 the permittee is authorized to discharge from outfall(s) serial number(s) 001

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS kg/day (lbs/day) Daily Avg	Daily Max	Other Units (Specify) Daily Avg	Daily Max	MONITORING REQUIREMENTS Measurement Frequency*	Sample Type
001 Flow-M^3/day (MGD)	-	-	-	-	Continuous Recording --	
001 Total Suspended Solids**	50(110)	150(220)	-	-	2 x Monthly	Composite
001 Total Dissolved Solids	8160(18,000)	10200(22500)	-	-	2 x Monthly	Composite
001 Oil & Grease	-	-	-	10 mg/l	2 x Monthly	Grab
001 Chromium	0.41(0.9)	0.59(1.3)	-	-	2 x Monthly	Composite
001 Zinc	2.7(6.0)	4.1(9.0)	-	-	2 x Monthly	Composite
001 Chlorobenzene	-	-	-	4.2 mg/l	2 x Monthly	Composite
001 COD	160(350)	480(1050)	-	-	2 x Monthly	Composite
001 Temperature	-	-	-	-	2 x Monthly	Record of Max.

*See Attachment 'C' (1)(2) ** Total Suspended Solids loadings are Net.

The daily average discharge is defined as the total discharge by weight during a calendar month divided by the number of days in the month that the production or commerical facility was operating.

The daily maximum discharge means the total discharge by weight during any calendar day.

The pH shall not be less than 6.0 nor greater than 9.0. The pH shall be monitored as follows: daily grab sample.

Samples taken in complaince with the monitoring requirements, above, shall be taken at the following location(s): prior to final discharge.

Monitoring reports shall summarize monitoring results obtained during the previous three months, and shall be postmarked no later than the 28th day of the month following each completed reporting period.

The permittee shall not discharge floating solids or visible foam in other than trace amounts.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OPTION A) DISCHARGE TO FIELDS BROOK

1. During the period beginning Jan. 1, 1976 and lasting until September 1, 1978 the permittee is authorized to discharge from outfall(s) serial number(s) 001

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS kg/day (lbs/day)		DISCHARGE LIMITATIONS Other Units (Specify)		MONITORING REQUIREMENTS Measurement Frequency *	MONITORING REQUIREMENTS Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
001 Flow-M^3/day (MGD)	-	-	-	-	Continuous	Recording --
001 Total Suspended Solids	50(110)	150(330)	25 mg/1	75 mg/1	2 x Monthly	Composite
001 Total Dissolved Solids	8160(18000)	10200(22500)	6800 mg/1	8500 mg/1	2 x Monthly	Composite
001 Oil & Grease	-	-	-	10 mg/1	2 x Monthly	Grab
001 Chromium	-	0.9	-	0.2 mg/1	2 x Monthly	Composite
001 Zinc	-	4.4	-	1 mg/1	2 x Monthly	Composite
001 Chlorobenzene	-	-	-	[illegible]	2 x Monthly	Composite
001 COD	160(350)	480(1050)	80 mg/1	240 mg/1	2 x Monthly	Composite
001 Temperature	-	-	-	-	2 x Monthly	Record of Max.

*See Attachment 'C' (1) & (2)

The daily average discharge is defined as the total discharge by weight during a calendar month divided by the number of days in the month that the production or commerical facility was operating.

The daily maximum discharge means the total discharge by weight during any calendar day.

The pH shall not be less that 6.0 nor greater than 9.0. The pH shall be monitored as follows: daily grab sample.

Samples taken in compliance with the monitoring requirements, above, shall be taken at the following location(s): prior to final discharge.

Monitoring reports shall summarize monitoring results obtained during the previous three months, and shall be postmarked no later than the 28th days of the month following each completed reporting period.

The permittee shall not discharge floating solids or visible foam in other than trace amounts.

wpw

OHIO ENVIRONMENTAL PROTECTION AGENCY
MODIFICATION OF NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM(NPDES)PERMIT

ISSUE DATE: July 9, 1975 EXISTING PERMIT NO: P 314 *AD

EFFECTIVE DATE: September 15, 1975 APPLICATION NO: P 314 *BX

ENTITY NAME: Olin Corporation

FACILITY LOCATION: Middle Road
Ashtabula, Ohio 44004

In accordance with the provisions of Ohio Environmental Protection Agency Regulation EP-31-06, the above-referenced NPDES permit is hereby modified as follows:

Page 1 - Revised Interim effluent limitations.
Page 2 - Revised Interim effluent limitations & deleted outfall 002.
[redacted]
Page 4 - [redacted] limit.
Page 5 - Updated Compliance Schedule.

Attached are the modified pages to the NPDES permit.(M1), (M2), (M3), (M4), (M5).

All terms and conditions of the existing permit not recommended for modification by this document will remain in effect. Further, any existing term or condition which this modification will change will remain in effect until any legal restraint to the imposition of this modification has been resolved.

When this modification is effective, the OEPA permit number will be changed to F 314 *BD . The application number willchange to OH 0001376.

Ned E. Williams

Ned E. Williams, P.E.
Director

OEPA-NPDES-38

Sampling

Olin Corporation

Did not participate.

USEPA - MODO

Charles Beier
Philip Gehring
Gary Goncher
Joseph Good
Edward McCue
Robert Styduhar (morning of first day)

OEPA - NEDO

Russell Hart
Richard Dybasic

4. Objective

The objective of this survey was to assess discharger compliance with NPDES Permit OH 0001376 issued on March 8, 1974.

5. Summary of Findings & Conclusions

Olin Corporation was not in compliance with the following effluent limitations contained in NPDES Permit OH 0001376 on the survey date.

	Survey Results (mg/l)	(lbs/day)	Daily Maximum NPDES Permit Limitations (mg/l)	(lbs/day)
Outfall 001				
Dissolved Solids	11,169	36,350	8,500	22,500
Chlorobenzene	[illegible]	133	0.3	0.79
pH	7.8-10.5 s.u.		6.0-9.0 s.u.	
Outfall 002				
pH	8.7-11.9 s.u.		6.0-9.0 s.u.	

Although the permit does not specify a compositing period, the company takes 8 hour composite samples vs. 24 hour composite samples. Hence, samples and measurements are most likely not representative of the volume and nature of the discharges, (Attachment "B", Section II). The company currently obtains oil and grease samples in polyethylene containers rather than glass containers. Olin Corporation did not meet the July 28, 1974 date for submitting its first self-monitoring report.

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION V
SURVEILLANCE AND ANALYSIS DIVISION
MICHIGAN-OHIO DISTRICT OFFICE

Compliance Monitoring Report

1. Discharger Identification

Olin Corporation
Ashtabula Plant
P. O. Box 206
Middle Road
Ashtabula, Ohio 44004
AC 216-997-5314

Receiving Stream: Fields Brook, tributary to Ashtabula River

NPDES Permit No: OH 0001376

NPDES Application No: OH 070 0X2 2 000401

Responsible Official: George Latta, Plant Manager

2. Date of Survey

Inspection: July 31, 1974
Sampling: August 1-2, 1974

3. Participants

Inspection

Olin Corporation

George Latta, Plant Manager
H. T. Emerson, Regional Manager of Environmental Affairs

USEPA - MODO

Robert J. Styduhar, Staff Engineer (Author)*

OEPA - NEDO

Notified but did not participate

* Prepared Sections 1,2,3,4,6 and 7. Sections 5 and 8 were prepared by Gary Amendola.

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION V
MICHIGAN-OHIO DISTRICT OFFICE

DISCHARGER: Olin Corporation
Ashtabula Plant

SAMPLE DATE: August 1-2, 1974

SAMPLE TYPE: 8 C - 8 HOUR FL
24C - 24 HOUR
EVC - EQUAL
G - GRAB

	INTAKE	Outfall 001 MODO #5627	Daily Maximum NPDES Permit Limitations Outfall 001	Outfall 002 MODO #5640	Da Pe
SAMPLE TYPE		24C	24C	24C	
FLOW		0.29-0.49 mgd Avg. 0.39 mgd	(Flow basis 0.32 mgd)	0.14-0.29 mgd Avg. 0.18 mgd	(Fl
TEMPERATURE		83.3-90.5°F Avg. 86.5°F	-	80.6-84.2°F Avg. 81.7°F	
PH		7.8-10.5 Std. units	6.0-9.0 Std. units	8.7-11.9 Std. units	

PARAMETER	PPM	PPM	GROSS #/day	PPM	GROSS #/day	PPM	GROSS #/day	PPI
Dissolved Solids		1,169	36,350	8,500	22,500	355	533	74
Suspended Solids		14	46	56	150	8	12	27
Chemical Oxygen Demand		133	433	-	-	208	312	-
Chromium, Total		0.025	0.1	0.3	0.79	<0.010	-	
Zinc, Total		0.03	0.1	3.0	7.9	<0.020	-	
Chlorobenzene		40	130	[illegible]	[illegible]			

	Oil and Grease	pH	Oil and Grease	Oil and Grease	pH	Oil
Grabs 0000	3.2	10.5	50	2.1	9.7	5
1000	2.4	10.5	50	2.9	8.8	5
1200	1.4	10.5	50	2.6	8.9	5
1400	2.8	7.9	50	2.0	9.0	5
1600	2.0	8.0	50	<1	8.7	5
1800	1.5	7.9	50	<1	9.3	5
2000	1.8	8.1	50	<1	11.9	5
2200	1.4	7.8	50	1.1	10.5	5
2400	2.1	8.3	50	1.6	9.5	5
0200	2.7	8.3	50	1.4	9.8	5
0400	2.5	8.4	50	3.9	9.7	5
0600	1.9	7.8	50	1.1	9.7	5

TABLE 1

Excursions for June 1979 - January 1980, As Reported by Olin in Self-Monitoring Reports

Date	Outfall	Parameter	Reported Value	Limit
9/11/79	**001**	**Chlorobe[redacted]**	**13.7 Kg/day**	**8.4 Kg/day**
1/15/80	001	TDS	10,339 Kg/day	10,200 Kg/day
1/16/80	001	TDS	11,165 Kg/day	10,200 Kg/day

INDUSTRIAL COMPLIANCE MONITORING REPORT

Olin Corporation
Middle Road
Ashtabula, Ohio 44004

Ohio EPA NPDES Permit No. F 314

Prepared By

Melinda Merryfield-Becker
Office of Wastewater

April 10, 1980

Excursions from January 1979, through December 1979,
as Reported in Entity's Self-Monitoring Reports

Date	Outfall	Parameter	Reported Value	Permit Limit	
				Monthly Avg.	Daily Max.
1/79	001	COD	515 kg/day		480 kg/day
1/79	001	pH	2.4-9.1 s.u. (2 violations)		6.0-9.0 s.u.
2/79	001	pH	3.1-10.0 s.u. (3 violations)		6.0-9.0 s.u.
3/79 - In compliance					
4/79	001	TSS	11309 kg/day		10200 kg/day
5/79	001	pH	9.1 s.u.		6.0-9.0 s.u.
6/79 - In compliance					
7/79 - In compliance					
8/79 - In compliance					
9/79	001	Chloro-benzene	13.7 kg/day		8.4 kg/day
10/3/79	001	Zinc	1.84 kg/day		1.80 kg/day
11/79 - In compliance					
12/79	001	Chloro-benzene	10.0 kg/day		8.4 kg/day

Volatile Organic Analysis of Effluent from
Olin Corporation Ashtabula ...ary 22-23, 1980
(3 grab sa...)

Date/Time of Collection	1-22-80/1130	1-22-80/2255	1-22-80/1127	
	Sample Number and Concentration (ppb)			
Compounds Detected	VOA #1 EDO472 80-EM03S07	VOA #2 EDO472 80-EM03S08	VOA #3 EDO472 80-EM03S09	Reagent Blank EDO472 80-EM03R10
1,1-Dichloroethane	< 2.2	< 2.1	< 1.7	9.9
1,2-Dichloroethylene	3.7	< 1.1	2.2	1.1
Chloroform	< 1.5	**3.6**	**4.6**	< 1.5
1,2-Dichloroethane	< 1.1	< 1.1	< 1.1	< 1.1
1,1,1-Trichloroethane	< 1.7	< 1.7	< 1.7	< 1.7
Carbon Tetrachloride	1.8	3.0	2.1	< 1.8
Bromodichloromethane	< 3.8	< 3.8	< 3.8	< 3.8
1-Bromo-2-Chloroethane	< 4.6	< 4.6	< 4.6	< 4.6
1,2-Dichloropropane	< 0.7	< 0.7	< 0.7	< 0.7
Trans-1,3-Dichloropropene	1.5	< 0.7	< 0.7	< 0.7
Benzene	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethylene	< 6.0	< 6.0	< 6.0	< 6.0
Chlorodibromomethane	< 1.5	< 1.5	< 1.5	< 1.5
1,1,2, Trichloroethane	< 1.5	< 1.5	< 1.5	< 1.5
Cis-1,3-Dichloropropene	< 1.5	< 1.5	< 1.5	< 1.5
Bromoform	< 1.4	< 1.4	26.3	< 1.4
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	**4.0**	< 1.0
Tetrachloroethylene	**4.0**	< 0.5	**2.0**	1.0
Toluene	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	< 0.5	< 0.5	< 0.5	< 0.5
1-methoxy-1-propene*	< 0.5	< 0.5	< 0.5	< 0.5
1,1 Oxybisethane*	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloro - 1,2,2-Trifluoroethane*	< 0.5	< 0.5	< 0.5	< 0.5

*Concentrations of all compounds denoted (*) were estimated versus the response of the other compounds.

5. Summary of Findings and Conclusions

a. The sampling results from this compliance sampling inspection show Olin to be achieving the limits contained in the NPDES permit. During 1979 the company's self monitoring reports indicate that there were, however, a total of eleven instances when the NPDES limits were not met by the company.

b. Based upon the data collected during this study the Olin discharge causes the concentrations of copper and dissolved solids in Fields Brook to exceed the maximum criteria in Ohio Water Quality Standards - Warmwater Habitat.

c. A total of eight organic compounds were found to be present in the Olin discharge sample. The concentration of these compounds ranged from 1.5 µg/l to 26.3 µg/l. Seven of these were volatile organics while the one was a non-volatile organic. The seven volatile organics were: 1,2 dichloroethylene; chloroform; carbon tetrachloride; Trans-1,3-Dichloropropene; bromoform; tetrachloroethylene; 1,1,2,2-tetrachloroethane. All of these compounds can be described as highly toxic except 1,2 dichloroethylene which is moderately toxic. Four of these, are known or suspected carcinogens. These four are carbon tetrachloride, chloroform, tetrachloroethylene, and bromoform. The non-volatile organic found to be present was Bis(2 ethyl-hexyl)phthalate, a phthalate ester. Phthalate esters are detrimental to aquatic organisms at low concentrations. The concentration of this compound measured in the Olin effluent, however, was below the Ohio Water Quality phthalate ester standard for a warmwater habitat of 0.003 mg/l.

d. The Ames Test performed on the Olin effluent sample proved to be positive. That is, the effluent did induce a mutagenic/carcinogenic response in the test bacteria. A possible cause may be the four organic compounds present in the effluent which are known or suspected carcinogens.

e. The static fish bioassay results were inconclusive, however, the 24 and 48 hour mortality to daphnia averaged 95% and 100%, respectively.

6. Description of Permittee

A. Facility

The Olin Corporation in Ashtabula manufactures meta-toluene, diisocyanate(M-TDI) which is used in the production of polyurethane foams. Two byproducts of TDI production, hydrochloric acid and ortho-toluenediamine (O-TDA) are also produced at this plant. Operations at the facility are on a 24 hour per day, 7 day per week basis. The plant location and the location of its wastewater discharge to Fields Brook are shown in Attachment 1.

B. Process

Attachment 2 is a schematic of the TDI production process. The raw materials used in the manufacture of TDI are: coke, oxygen, carbon dioxide, chlorine, and TDA.

The process begins wtih carbon, in the form of coke, being burned to produce carbon monoxide (CO). The CO gas is passed through a scrubber in order to remove coke fines and to cool the gas. The CO gas is then reacted with chlorine to produce carbonyl chloride. Together with toluene diamine, the carbonyl chloride is reacted in an organic solvent, monochlorobenzene. After this reaction, several distillation steps are performed to remove the product and the by-product. The first distillation removes the by-product HCl which is sold as acid. The second step recovers unreacted

U.S. Environmental Protection Agency
Region V
Surveillance & Analysis Division
Eastern District Office

Compliance Monitoring Field Report

1. Permittee Identification

Olin Corporation
Middle Road
Ashtabula, OH 44004

Corporate Offices:
Olin Corporation
120 Long Ridge Rd.
Stamford, CT 06904

NPDES Permit: OH 0001376

Receiving Streams:

Fields Brook to Ashtabula River

Responsible Official:

William G. McGlasson - Plant Manager
(216) 998-1176

2. Dates of Inspection and Survey: January 22-23, 1980

3. Participants

Permittee

Paul Duff, Specialist Environmental Affairs, Olin Corporate Headquarters, Stamford, Connecticut
Lawrence Matson, Production Supervisor
Robert Smith, Plant Chemist

Ohio EPA

Melinda Becker, Environmental Scientist

U.S. EPA

Mark Moloney, Environmental Engineer, Author
Charles Beier, Engineering Technician
Joseph Good, General Mechanic
Philip Geiring, Chief, Field Support Team
Roland Hartranft, Engineering Technician

4. Objective

This compliance sampling inspection was conducted pursuant to a December 19, 1979, Enforcement Division request to verify compliance with NPDES permit OH 0001376 and applicable stream standards. In addition, three special tests were performed at this facility to check for the presence of any toxic pollutants in the company discharge. These tests include static bioassay tests, scans for organic pollutants and the Ames Test.

OhioEPA

Paul B. Duff
Specialist, Environmental Affairs
Olin Chemicals Group
120 Long Ridge Rd.
Stamford, Connecticut 06904

July 12, 1979

Dear Mr. Duff:

On May 29, 1979, we received a proposal from Olin requesting approval to dispose of a spent caustic scrubber solution at Reserve Environmental Services' site near Ashtabula. The waste was specifically described as originating from a TDI (Toluene diisocyanate) scrubber and phosgene destroyer serving to control air emissions. During the scrubbers operation at Olins' Ashtabula plant, 17% sodium hydroxide which acts as the scrubbing media, is reduced to 2% from reacting with HCL and phosgene. The reaction products are mainly NaCl and Na_2CO_3. A typical analysis of the waste was submitted as follows:

Chlorides	9,621 ppm
NaCl	1.586 %
Total Dissolved Solids	37,428 ppm
NaOH	.752%
Na_2CO_3	1.85%
$NaHCO_3$	--
TOC	72 ppm
MCB (Monochlorobenzene)	10.68 ppm
Color	Black, after settled, liquid clear - very light green
Sp. Gravity	1.038
Temperature	25.5°c
pH	11.9 S.U.
~~Total Suspended Solids~~	~~4,264 ppm~~
TDA (Toluene diamine)	
2,6 -	.50 ppm
2,4 -	1.0 ppm
Aniline	None detectable
2,3 -	.50 ppm
3,4 -	.50 ppm

Approximately 750,000 gallons of the above material is generated monthly. In the past, this entire volume was processed through the company's wastewater treatment system which discharges treated effluent to Fields Brook. Due to favorable changes in the TDI market, the company will be operating the manufacturing facility at or near 100% production capacity for the first time since the NPDES permit system was initiated. During warm weather months the facility generates higher concentrations of TDS, and thus the

N,N-Diethylaniline (probable)
Tetradecanol
Hexanedioicaciddimethylester
Methylnaphthylene (2 isomers)
Diisopropylbenzene
Tetrachlorobenzene
Biphenyl
Dihydroacenaphthylene

C. HEAVY METAL ANALYSIS

ELEMENT	CONCENTRATION (ppm except where noted)
Beryllium	0.67; 0.5; 0.82
Cadmium	1.9; 0.5; 1.3
[redacted]	[redacted]
Copper	40; 36; 52
[redacted]	[redacted]
[redacted]	[redacted]
Zinc	102; 97; 98
Silver	None Detected (Limit - 3 ppm)
[redacted]	[redacted]
Antimony	None Detected (Limit - 0.05 ppm)
Selenium	0.22: 0.28; 0.34
[redacted]	[redacted]
[redacted]	[redacted]
Sodium	674; 751; 909

*Concentration in ppb

COMPOSITION

A. OVERALL COMPOSITION

1) actual on specific sample

38% total solids
4% oil and grease
.1 → .3% heavy metals (explained in item C)
tr → .1% organics (explained in item B)
57.6% water

B. ORGANIC CONTENT

COMPOUND	CONCENTRATION (ppm)
[redacted]	[redacted]
Monochlorobenzene	125
Styrene	362
Dichlorobenzenes (2 isomers)	17
[redacted]	[redacted]
Trichlorobenzene	0.21
Naphthalene	0.13
Acenaphthalene	1.4
Fluorene	greater than 1.7
[redacted]	[redacted]
Anthracene	4
[redacted]	[redacted]
Isomer of Fluoranthene	3.7
Pyrene	

Compounds Identified but not quantitated

Trichloroethylene
Toluene
Octane
Dimethylcyclohexane
Methylethylbenzene (3 isomers)
2-Ethylhexanol
Methylethenylbenzene
Methylethylcyclopentane
Ethyldimethylbenzene (3 isomers)
Dodecane
Ethyltrimethylbenzene
2-Phenylaminoethane (probable)
Ethylethenylbenzene
Undecane
Pentanedioic aciddimethylester

BHT
Dimethylnaphthalene (2 isomers)
Nonylbenzene
Heptadecene
Trimethylnaphthalene (4 isomers)
Pentachloropyridine
Butylnaphthylene
Phenalene
Methylfluorene
Dibenzothiophene
Methyldibenzothiophene (2 isomers)
Methylphenanthrene
Dimethylphenanthrene (2 isomers)
Methylpyrene (2 isomers)

Olin

120 LONG RIDGE RD., STAMFORD, CONN. 06904

August 16, 1979

Mr. Dennis Lee
District Engineer
State of Ohio Environmental
Protection Agency
Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087

Dear Mr. Lee:

This letter will confirm our phone conversation on August 6, 1979. Olin has generated approximately 12,000 pounds of sludge precipitated in the north end of our large wastewater treatment lagoon. Baffling has been constructed to promote laminar flow and assure that this insoluble material is deposited in the specially compartmentalized area encompassing approximately 20% of the total lagoon area.

Plant personnel obtained permission from the Ohio EPA to reduce the level in the west pond and initiate cleaning operations to remove deposited material. Only 12,000 lbs. of sludge was removed during the semi-annual plant shutdown conducted in May. Olin has isolated this material in a solar dewatering area, however, it is now necessary to dispose of this sludge in an Ohio EPA approved disposal site.

Olin respectfully requests approval to dispose of this wastewater treatment sludge in Environmental Reserve's Middle Road lagoon system. The composition of this stream is listed in the attachments, plus other pertinent information.

After you have reviewed this request, I would appreciate notification of your decision prior to any conversations and/or correspondence with Environmental Reserve. Once it has been determined that Environmental Reserve can handle this waste stream, I would appreciate the opportunity of discussing this situation with them directly.

If you require any additional data, please don't hesitate to call me.

Very truly yours,

Paul B. Duff
Specialist, Environmental Affairs

PBD/kc
Attachment

INDUSTRIAL COMPLIANCE MONITORING REPORT

OLIN CORPORATION
Middle Road
Ashtabula, Ohio 44004

Ohio EPA NPDES Permit No. F 314

Prepared By

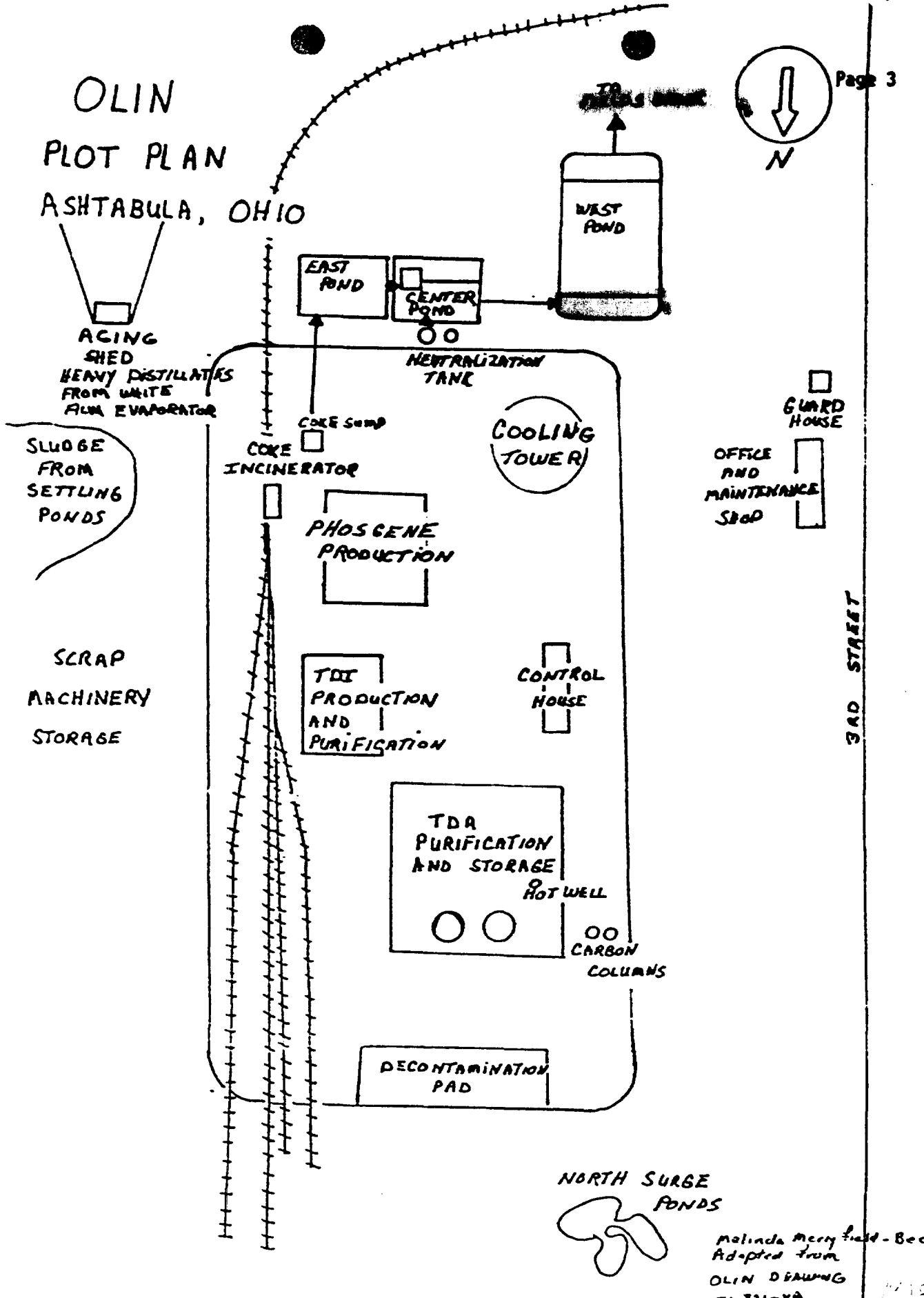
Melinda Merryfield-Becker
Office of Wastewater
August 29, 1979

SUMMARY

Olin's TDI plant in Ashtabula, Ohio, was found to be in compliance with the conditions of their NPDES permit during the monitoring and compliance inspection conducted July 17, 1979. The problems with chlorine and mercury discovered during the 1978 inspection appear to have been corrected. The "Containment and Cleanup of Stormwater Runoff" program designed to reduce COD loadings appears to have been successful thus far. Olin plans to upgrade this system in the near future.

Refinements should be made in the pH control system so the entity can maintain compliance on a continuous basis.

Olin continues to struggle with the TDS allocation established in the WLAR. Although the entity has had little trouble meeting these limits in the past, increased production promises to cause more violations. Olin is presently negotiating with the Agency for a higher TDS allocation. Olin's newly developed environmental awareness program should improve operating personnel's concern for complying with the NPDES permit.



Melinda Merryfield-Becker
Adapted from
OLIN DRAWING
E1 321-X3

Olin CHEMICALS GROUP
P O BOX 300, ASHTABULA, OHIO 44004

December 30, 1977

Mr. Russell Hart
Division of Industrial Wastewater
Northeast of District Office
2110 East Aurora Road
Twinsburg, Ohio 44087

Re: NPDES Permit No. P 314 BD

Dear Mr. Hart:

A grab sample for monochlorobenzene analysis was taken at Olin Ashtabula's outfall #001 on December 15, 1977. The test results indicated a discharge rate of 12.2 kg/day (versus a NPDES permit maximum of 8.4 kg/day). A delay occurred in analyzing this sample because of a strike by Olin's hourly personnel and, therefore, a reduced workforce currently operating the facility. Once the 12.2 kg/day discharge rate of MCB was properly documented, a re-sample was taken on December 23, 1977 and this yielded a 1.83 kg/day level, substantially below the permitted maximum.

A review of weather conditions on December 15 indicated that rain and melting snow resulted in unusually high storm water runoff and ultimately, total plant discharge rates. It is felt that the higher than usual discharge of MCB only occurred during the short period that flow rates were excessively high.

Plant personnel have reviewed the operation and concluded that the unusual weather conditions were probably responsible for high levels of MCB on the 15th. Olin will continue its efforts to assure that monochlorobenzene is properly contained within the system.

Sincerely,

OLIN CORPORATION

James E. Langford
Plant Manager

JEL:ec

Certified Mail: Return receipt requested.

Olin CHEMICALS GROUP
100 McKEE ROAD, ROCHESTER, NEW YORK 14611

March 8, 1977

Mr. James O. McDonald/Director
Enforcement Division
U.S. Environmental Protection Agency
Region V
230 South Dearborne
Chicago, Illinois 60604

Dear Mr. McDonald:

The Olin-Ashtabula facility does not [redacted] it discharge any hexachlorobenzene into the environment. This plant, therefore, has not in the past and has no future plans for limiting the formation or release of HCB. This response constitutes fulfillment of your requests relative to HCB discharges as specified in the December 23, 1976, letter to Larry Hinson (Ashtabula's Plant Manager at that time).

If you have any additional questions, please don't hesitate to contact this office.

Sincerely,

OLIN CORPORATION

Paul B. Duff/Specialist
Environmental Affairs

PBD:cd

Olin CHEMICALS GROUP
100 McKEE ROAD, ROCHESTER, NEW YORK 14611

February 8, 1977

Mr. James O. McDonald/Director
Enforcement Division
U.S. Environmental Protection Agency
Region V
230 South Dearborne
Chicago, Illinois

Dear Mr. McDonald:

A composite sample of the industrial effluent from Olin's Ashtabula facility was taken in January to comply with your request for information pertaining to the possible discharge of hexachlorobenzene. A Sigmamotor Automatic Sampler (Model Number 239-3) was used to take a 24-hour composite. This particular device takes a 60 c.c. aliquot in 2 minutes out of every 15 minute period. The wastewater flow rate was relatively constant during the sampling period at 375 gallons per minute.

The samples were well mixed and 100 ml aliquots were removed and extracted with 25 ml of hexane. The hexane extracts were analyzed on the Perkin Elmer 3920B Electric Capture Gas Chromatograph (Nichel 63 Detector) on 5 ft ¼" stainless steel columns with 3% SE-30 on chromosorb G (80-100 mesh) at a column temperature of 190°C.

No hexachlorobenzene was detected in the sample (lower detection limit of .5 ppb was verified on the tracing labeled figure 2). A recovery of 103% was obtained when .104 mg hexachlorobenzene was added to 100 µl of sample and taken through the procedure described above. The tracing for both the virgin wastewater sample and the "recovery standard" is identified as figure 1.

I apologize for the delay in reporting these results, but several phone conversations with Jon Barney have served to inform your office relative to the status of our report. If you have any questions, please don't hesitate to contact my office.

Paul B. Duff
Environmental Specialist

PBD:cd
Att.

[redacted]
Water [redacted]

OLIN MATHIESON CHEMICAL CORP.
Ashtabula, Ohio

Analytical Summary
for month of March , 1972

Date Sampled	3/2/72				3/6/72				3/17/72				3/22/72				3/28/72			
Stream Sampled	Up-strea	Out-fall	Storm sewer	Down strm	Up strm	Out-fall	Storm sewer	Down strm	Up-strm	Out-fall	Storm sewer	Down strm	Up-strm	Out-fall	Storm sewer	Down strm	Up-strm	Out-fall	Storm sewer	Down strm
Flow, GPM	X			X	X			X	X			X	X			X	X			X
pH	4.3	11.1	8.8	8.8	6.7	9.9	8.2	8.2	6.6	7.6	7.9	6.8	3.5	8.0	9.6	7.3	7.3	8.4	8.3	8.1
Caustic Alkalinity mg CaCO3/l	—	2511	24	9	—	458	—	—	—	—	—	—	—	—	285	—	—	2	—	—
Total Alkalinity, mg CaCO3/l	—	4908	209	100	31	1253	110	124	20	379	296	41	—	476	6492	92	34	83	134	54
Total Acidity, mg CaCO3/l	19	—	—	—	—	—	—	—	—	—	—	—	108	—	—	—	—	—	—	—
Free Acidity, mg CaCO3/l	3	—	—	—	—	—	—	—	—	—	—	—	41	—	—	—	—	—	—	—
Chlorides, mg/l	108	4370	127	189	133	2083	80	398	140	3307	140	326	190	2820	170	382	519	3032	85	753
COD, mg OC/l	11	76	996	38	4	456	217	46	61	243	1011	84	53	372	931	15	8	31	126	15
Suspended Solids mg/l	417	109	776	171	52	106	85	90	19	23	717	22	95	38	189	44	39	26	21	29
Settleable Solids, ml/l	1.8	.6	4.0	2.7	1.5	.9	.1	1.2	.1	.1	2.8	.1	4.5	Tr.	1.5	2.0	1.2	T	T	.7
Appearance	Turb.	Turb.	Turb.	Turb.	Tur.	Tur.	Tur.	Tur.	Tur.	Tur.	Tur.	Tur.	Tur. Bron	Sl Tur.	Yello Tur.	Sl Tur.	Tur.	Sl.T.	Tur.	Tur.
Odor	M	CS	CH	M	N	M	M	N	M	M	CS	M	M	M	M	M	M	Ch	Ch	M
Pond Freeboard, ft.																				
% Solids																				

December 15, 1969

Olin Corp.
Organics Div.
Middle Rd. Box 206
Ashtabula
Permit No. 1860 Expires 7-1-70

Contact: R. N. Pappenfuss Plt. Mgr.
Jake Zoker Tech. Supervisor
L. Roznoy Corp. N.Y. (Not contacted)

Products: Muratic Acid and T.D.I.

Raw Materials: Chlorine, Coke, Carbon Monoxide, and Phosgene.

Industrial wastes are 500,000 Gal per Day plus about 20,000 gal of spent caustic.

All industrial wastes flow into air agitated ponds in series for treatment with lime slurry and caustic at adjust Ph and settle solids. The ponds are 40' by 40' and 5' deep.

The effluent from the pond flows into Fields Brook and thus into the Ashtabula River.

On the day of my visit the effluent looked Ok.

However the effluent is too high in settleable solids, and Ph is on the high side, and when all the other chemical plants get their house in order they will have to lower the Ph.

I suggested that they experiment with a number of agents that would improve settling, and suggested that they need a third pond so that when one pond is being cleaned they would be able to abtain proper settling.

Off grade acid and solids are hauled away.

Robert L. Swain

TO	R. H. Papenfuss	AT	Ashtabula	DATE	March 21, 1969
FROM	J. E. Ecker	AT	"	COPY TO	S. Cupach L. Rosnoy H. Hogeman
SUBJECT	Effluent Discharge Permit				

During the past year some improvements have been made to the condition of our effluent and projects are in the works now which should result in further improvements. Additional work needs to be done in the near future.

Settleable Solids

Solids content have long been one of our most prevalent problems. Procedures were modified last year to send all process water through the settling basins. This resulted in an immediate lowering of the residual settleable solids in the effluent stream. After a few months the solids content went up and the pond filled with solids. The reduced effectiveness of the ponds persisted longer than would normally been permitted because of the difficulty with scheduling the cleaning contractor. After cleaning, the solids content has in general been good but has been sporadically higher than desired. The effectiveness of the ponds can perhaps best be testified to by the rate of solids accumulation therein. Sufficient solids have been removed from the effluent since October to necessitate recleaning the ponds in the near future. The cleaning contractor has been contacted and the pond will be cleaned as soon as possible.

Although solid material is collecting in the settling basins and the discharge stream is usually free from solids amenable to treatment by settling, there are still frequent instances of high suspended solids. Tests are being initiated to test methods of improving the settleability of the suspended solids.

pH

Utilization of byproduct muriatic acid essentially eliminated the discharge of muriatic acid a few years ago. The recent installation of additional storage facilities further reduces the liklihood of muriatic disposal problems.

Planned modifications to the air pollution control equipment will reduce the amount of spent caustic to be disposed of and thereby reduce the effluent pH, but it must still be maintained relatively high to avoid interactions with other materials known to be in Fields Brook causing obnoxious odors.

OLIN ASHTABULA
PRIORITY POLLUTANT ANALYSIS
SUMMARY

EPA Pollutant No.	Priority Pollutant	Quantity Average of All Values ugm/l	Maximum Quantity ugm/l
1	Acenaphthene	0.9	0.9
4	Benzene	5.7	10.0
5	Carbon Tetrachloride	9.3	17.0
7	Mono Chlorobenzene	6.3	8
8	1, 2, 4-Trichlorobenzene	0.15	0.15
10	1, 2-Dichlorethane	Trace(x)	x
12	Hexachloroethane	x	x
23	Chloroform	4.0	4.0
24	2-Chlorophenol	0.6	0.6
25	1, 2 Dichloro Benzene	x	x
31	2, 4-Dichlorophenol	0.7	0.7
39	Fluoranthene	0.13	0.13
44	Methylene Chloride	46	110
47	Bromform	x	x
48	Bromo Dichloro Ethane	x	x
55	Naphthalene	0.14	0.14
65	Phenol	1.0	1.0
66	Bis-2-ethyl hexyl phthalate	168	168
67	Butyl Benzyl Phthalate	34.0	34.0
68	Di-N-Butyl Phthalate	0.6	0.6
70	Diethyl Phthalate	2.2	2.2
84	Pyrene	0.06	0.06
86	Toluene	2.5	4.0
114	Antimony	10	10
115	Arsenic	10	10

EXHIBIT B-2

INDUSTRIAL WASTEWATER DISCHARGERS
EFFLUENT DATA

Facility Name River Mile Index	Parameter	July thru Sept. 1978 Mean Daily Effluent No. of Tests	 lb/d[2] mg/l	Principal Product	Actual Flow (mgd)	Type of Waste	Type of Treatment
NMI[1] 6 Stream Network: 2.56 Fields Brook, 1.60 Ashtabula River, 1129.80 Lake Erie							
[redacted]	Flow(mgd)	11	0.495	Toluene dii-socyanate, HCl	0.476	Process, sanitary H/C cooling, tower blowdown	Neutralization, coagulation, settling, skimming. Septic tank used for sanitary waste
	pH(SU)	92	7.34				
	T(C)	8	26.6				
	COD	9	272 66.6				
	[redacted]	[redacted]	[redacted]				
	O & G	8	5.68 1.375				
	Cr	8	0.044 0.010				
	Zn	8	1.232 0.298				
	DS-105C	9	12840 3100				
	Chlorobenzene	8	1.310 0.325				

Reference: Tables 4 and 7, "Initial Water Quality Management Plan - Ashtabula County," Part II (revised 9/79).

1. See Exhibit B-1, footnote 1, supra.
2. Unless otherwise specified under the column headed "Parameter."

J. RICHARD WOHLER Ph. D.
LABORATORY DIRECTOR

FREE-COL LABORATORIES
DIVISION OF FREEPORT BRICK COMPANY
P.O. BOX 557, COTTON ROAD
MEADVILLE, PENNSYLVANIA 16335
PHONE: (814) 724-6242

TO: U.C.C. Linde Wire

DATE SAMPLE(S) RECEIVED 6/16/83/044-047

LAND FILL WELLS

ANALYTICAL REPORT FORM

Parameter	Well #211	Well #212	Well #213	Well #214
Copper mg/L	<0.05	<0.05	<0.05	<0.05
Cadmium mg/L	0.03	0.03	0.03	0.03
Arsenic mg/L	0.006	0.004	0.007	0.014
Barium mg/L	0.02	0.04	0.02	0.02
Chromium mg/L	<0.05	<0.05	<0.05	<0.05
Fluoride mg/L	0.56	0.27	0.35	0.18
Lead mg/L	**0.14**	**0.13**	**0.15**	**0.18**
Mercury mg/L	0.0001	<0.0001	0.0007	<0.0001
Selenium mg/L	<0.002	<0.002	<0.002	<0.002
Silver mg/L	0.01	0.01	0.01	0.01

6/27/83

/mh

A.I.H.A. Accreditation No. 98
EW/CLIA Lic. No. 37-1129

PA. Department of Health
Clinical Laboratory Permit No. 561
E.P.A. Facility No. 38-073

KEY: < = LESS THAN > = GREATER THAN w.f. = WILL FOLLOW

044/044

LINDE WELDING

INITIAL BACKGROUND CONCENTRATIONS
OF
INDICATOR PARAMETERS
FOR
DOWNGRADIENT WELLS *

	First Quarter 2/8/82	Second Quarter 5/24/82	Third Quarter 8/16/82	Fourth Quarter 11/4/82
WELL 105A				
pH	7.5	7.5	7.3	7.1
Electrical Conductance (umhos/cm)	2600	2400	3000	2800
Total Organic Carbon (mg/1)	19	8.6	6	23
Total Organic Halogen (mg/1)	<0.02	0.02	<0.02	0.03
WELL 201				
pH	7.8	7.7	7.0	7.4
Electrical Conductance (umhos/cm)	3200	3100	3200	2900
Total Organic Carbon (mg/1)	15	20	5	21
Total Organic Halogen (mg/1)	<0.02	0.03	<0.02	0.03
WELL 202				
pH	7.4	7.1	7.3	7.2
Electrical Conductance (umhos/cm)	3100	3100	3300	3200
Total Organic Carbon (mg/1)	26	6.1	7	21
Total Organic Halogen (mg/1)	0.33	0.18	0.04	0.02

* Federal Regulation 265.92(c)(1) and 265.94(a)(2)(ii)
Ohio Regulation 3745-65-94 (A)(2)(b)

* 2nd and 3rd quarter missing:
12/1/82 - 637.7
12/6/82 - 657.8

FIRST YEAR MONITORING WELL DATA

WELL NO. 105A (~~Upgradient~~ or downgradient well)

Sampler (signature) _____

GROUP	CHEMICAL CONSTITUENTS / PARAMETER	MCL	1st Quarter Sample Date 2-8-82 Static Water Level 639.4	2nd Quarter Sample Date 5-24-82 Static Water Level *	3rd Quarter Sample Date 8-16-82 Static Water Level *	4th Quarter Sample Date 11-4-82 Static Water Level 637.4	COMMENTS
I	Arsenic	0.05 mg/l	<0.005	<0.005	.005	0.020	
	Barium	1.0 mg/l	<0.6	0.64	.15	<0.10	
	Cadmium	0.01 mg/l	0.02	<0.01	<0.01	<0.01	
	Chromium	0.05 mg/l	<0.05	<0.05	< .05	<0.05	
	Fluoride	1.4-2.4 mg/l	<0.2	<0.1	<0.1	0.2	
	Lead	**0.05 mg/l**	**0.08**	**.017**	**.14**	**<0.05**	
	Mercury	0.002 mg/l	<0.0005	0.0026	< .005	<0.0005	
	Nitrate(N)	10.0 mg/l	0.07	0.14	0.10	<0.1	
	Selenium	0.01 mg/l	<0.005	<0.005	< .05	<0.040	
	Silver	0.05 mg/l	<0.05	<0.01	0.11	<0.01	
	Endrin	0.0002 mg/l	<0.0002	<0.0002	<0.0002	<0.0002	
	Lindane	0.004 mg/l	<0.0002	<0.004	<0.004	<0.004	
	Methoxychlor	0.10 mg/l	<0.004	<0.1	<0.1	<0.1	
	Toxaphene	0.005 mg/l	<0.004	<0.005	<0.005	<0.005	
	2,4-D	0.10 mg/l	<0.004	<0.01	<0.1	<0.1	
	2,4,5-TP Silvex	0.01 mg/l	<0.004	<0.01	<0.01	<0.01	
	Radium 226	5 pCi/l	<0.6	<0.6	-	-	what does this mean?
	Radium 228		<1	<1	-	-	
	Gross Alpha	15 pCi/l	<2	23±16	<2	<2	
	Gross Beta	50 pCi/l	<3	10±3	9±3	4±2	
	Turbidity	1 TU					
	Coliform	<1/100 ml.	510	<1	2	<1	
II	Chloride		81	94	94	93	Analyses required, but not necessary to report.
	Iron		0.48	39	< .03	0.08	
	Manganese		8.0	8.0	3.2	7.3	
	Phenols		<0.001	<0.001	0.025	<0.001	
	Sodium		190	190	190	190	
	Sulfate		1900	1800	1800	1800	

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ES ENGINEERING-SCIENCE

EPA OFFICIAL USE ONLY
Premise No. ____/____/____/____
Source No. ____/____

DATA SHEET

STACKS AND OTHER EGRESS POINTS

FURNACE #14
SCRUBBER PIT VENT STACK
BUILDING NO. 51

1. Facility Name: Union Carbide Corporation, Metals Division — Person to Contact: C.B. Matthews

Facility Address: P.O. Box 40 (Street) — Mailing Address: P.O. Box 40 (Street)

Ashtabula (City, Village or Township) | Ashtabula (County) | 44004 (Zip) — Ashtabula (City) | Ohio (State) | 44004 (Zip)

Telephone: 216 (Area Code) 997-6141 (Number)

2. Type: ☐ Round ☐ Rectangular - top inside dimension(s) (L & W or Diam.) 8" dia.

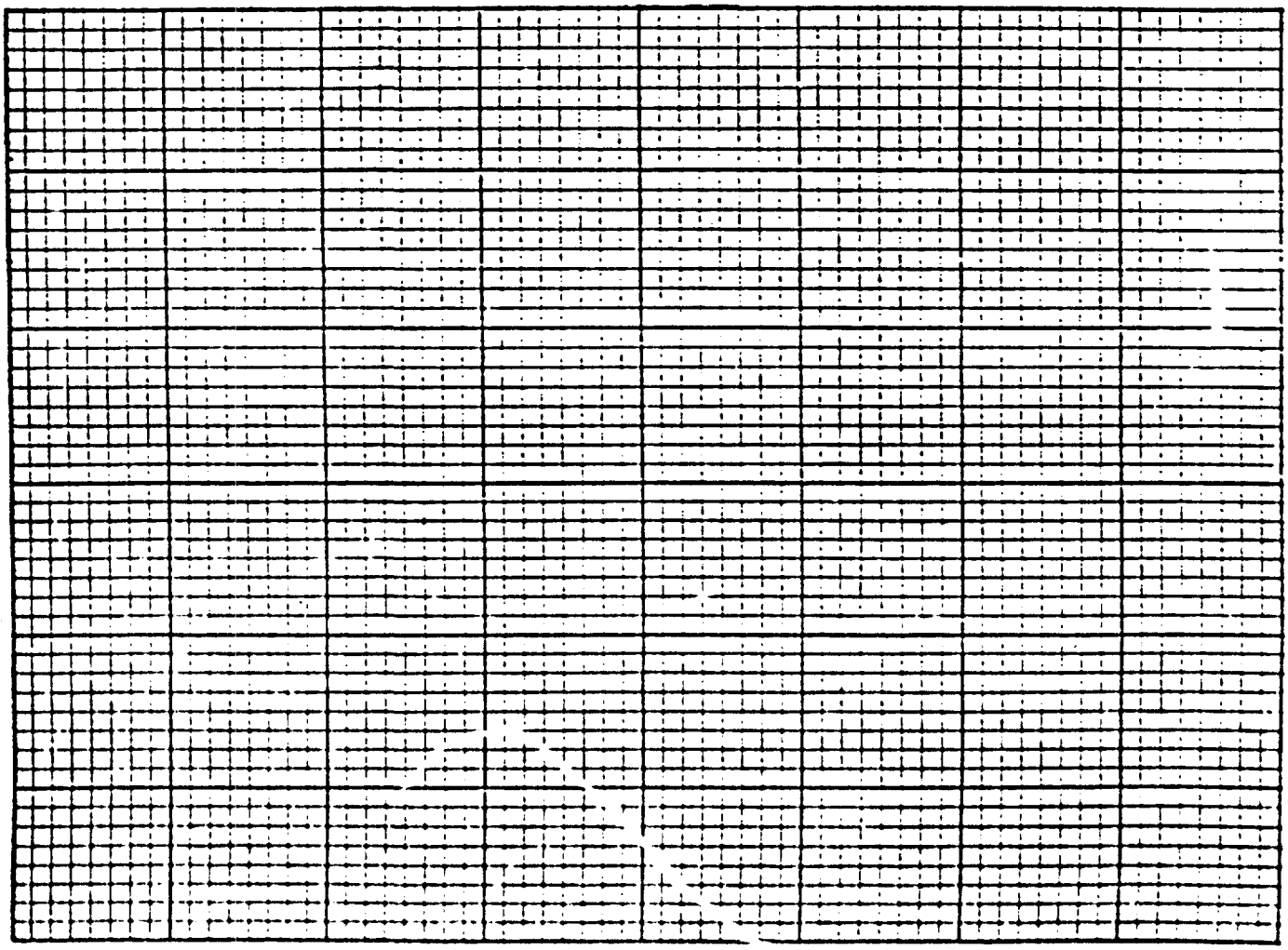
3. Height: Above roof 17 ft. Above ground 91 ft.

4. Exit gas: Temp. N.A. °F. Volume N.A. ACFM Velocity N.A. feet per minute 1" S.P.

5. Continuous monitoring equipment: ☐ Yes ☐ No. If yes, indicate: Type ____

Manufacturer ____ Make or model ____ Pollutant ____

6. Draw a flow diagram in plan view of the source equipment, control equipment and stacks. If more than one source or control device discharges into this stack show all connections. Total length, 126 L.F.



Important Note: If emissions from the above stack have been determined by performance testing or other means, include such data and supporting calculations with this data sheet.

AP-PS-81

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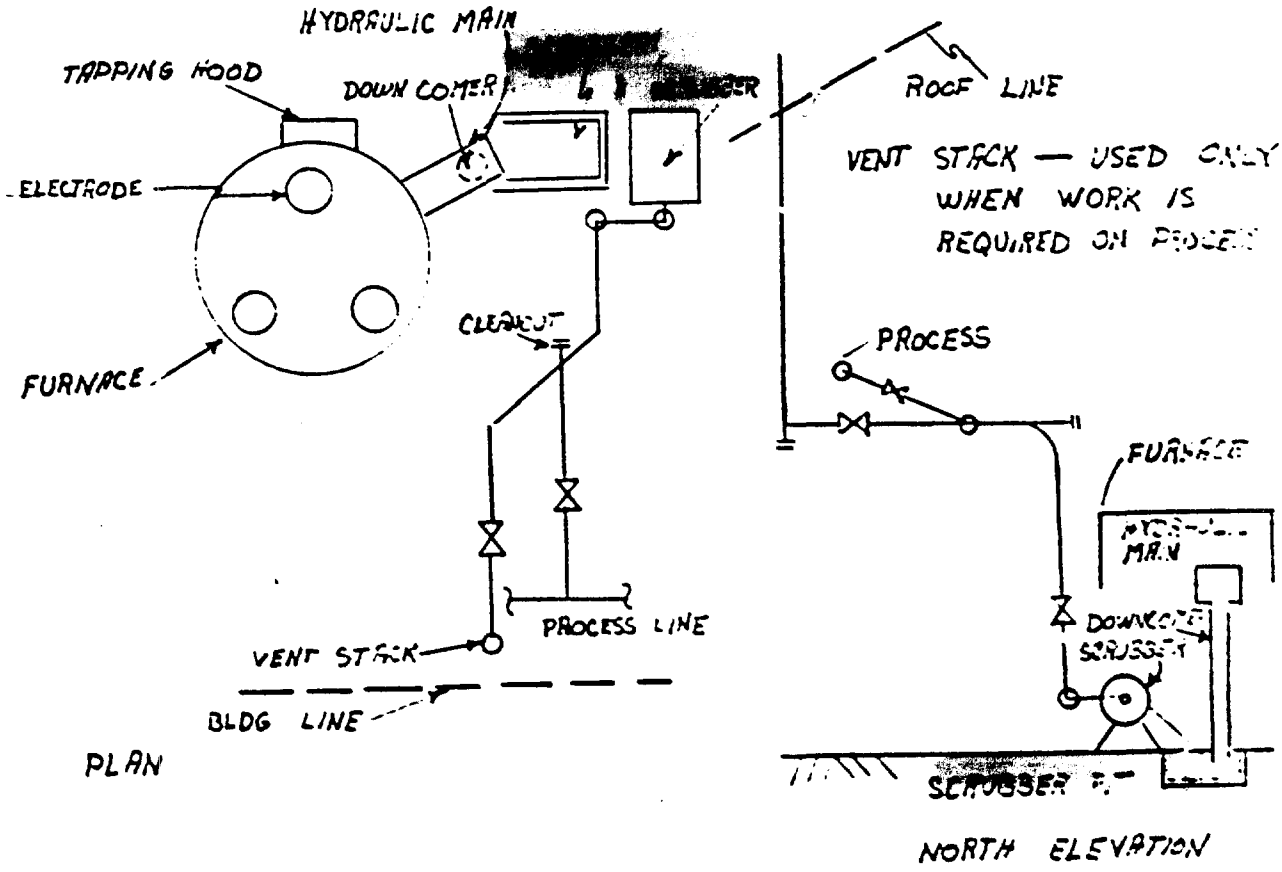

WET COLLECTOR

FURNACE #14

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